the American Perfumer and ESSENTIAL OIL REVIEW

AUGUST 1951

COSMETICS · SOAPS · FLAVORS

Vidal-Charvet

VIROLIA

Pure 100%. Unequalled specialty with an exquisite and characteristic odor, reminding of Violet and Orris. Virolia gives most excellent results and we strongly recommend its use in high grade extracts as well as for powders and creams.

MIOSOTYS

Still one of the outstanding and most popular of the Vidal-Charvet group—and justly so. Characteristic of the ever-popular Honeysuckle note, Miosotys is really a complete perfume extract bouquet.

VIDAL - CHARVET specialties and perfume bases for extracts, toilet waters and cosmetics are scientifically created for the fastidious demands of the world's leading perfumers. They are certain to contain the note required for your newest product, exact to the subtle shadative you have in mind.

• • • • •

Above are two VIDAL - CHARVET specialties and perfume bases which have been accepted by the trade as outstanding products.

Sole Owner

Ungerer & Company

161 AVENUE OF THE AMERICAS, NEW YORK 13, N. Y.

Plant and Laboratories, Totowa, N. J.

Exclusive Representative for Charabot et Cie, Grasse, France Natural Floral Products, Resinaromes and Essential Oils

PHILADELPHIA CHICAGO BOSTON ST. LOUIS LOS ANGELES ATLANTA

VOLUME 58 NUMBER 2

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the American Perfumer and ESSENTIAL OIL REVIEW

COSMETICS · SOAPS · FLAVORS

Established 1906

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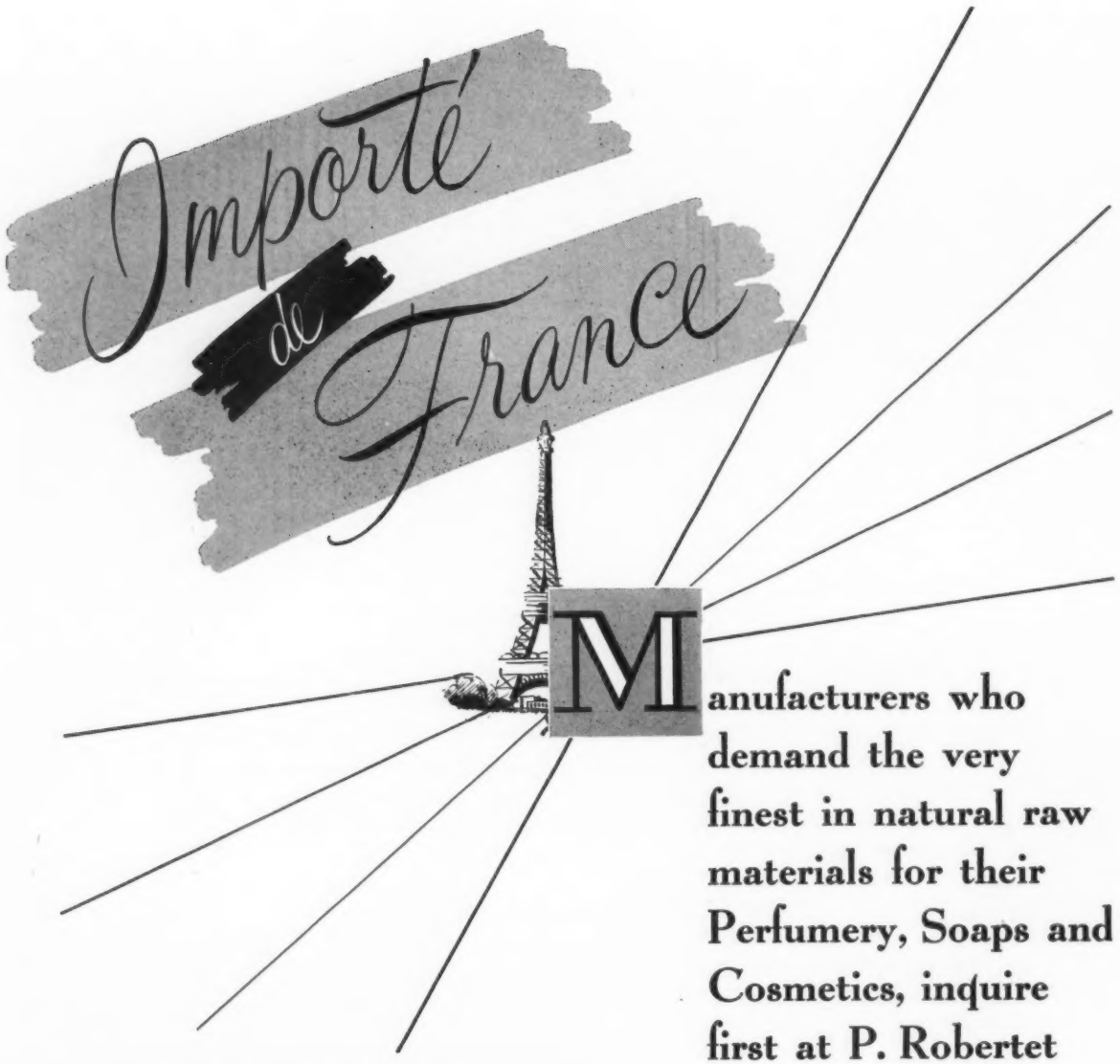
Research

Production

Management and Sales Promotion

Regular Features



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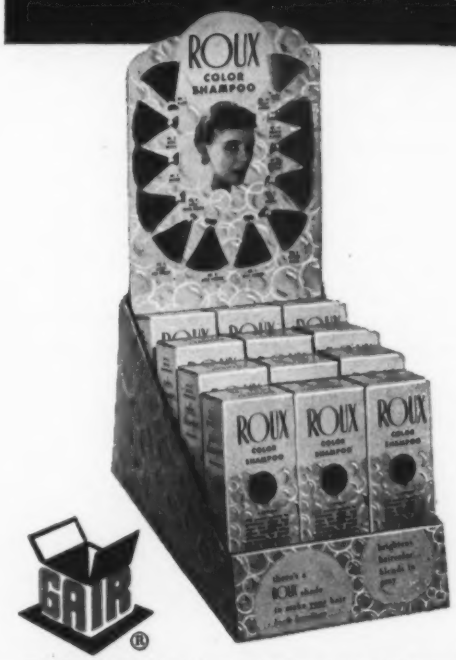

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Mary in the mirror duplicates Mary in the flesh.

Even perfume experts have a hard time telling a Dreyer Synthetic Scent from the original flower odor it duplicates. Every Dreyer Synthetic has most authentic characteristics.

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Depend on Dreyer's stabilized prices to keep your costs from rising. Save when you *buy*—save when you *use*—get more profits from your perfume products. Send today for samples that prove what you'll save by using Dreyer Synthetics.

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for Essential Oils,
Aromatic Chemicals, Perfume Compounds

Please send your catalogue of Dreyer Synthetic Scents, and samples of.....

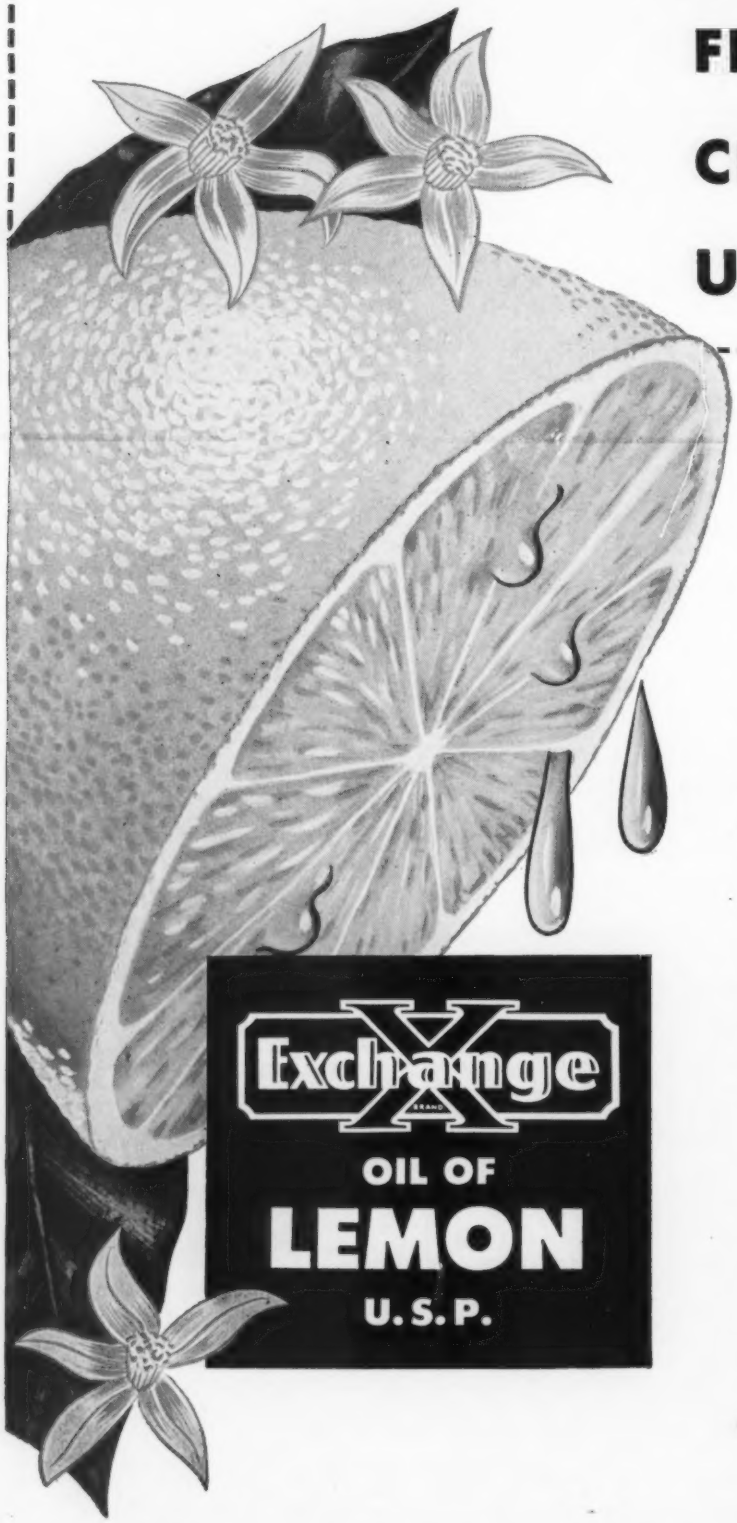
.....

YOUR NAME.....YOUR COMPANY.....

STREET.....CITY.....ZONE.....STATE.....

8 out of 10 say it's *best* for

FLAVOR
CLARITY
UNIFORMITY



Yes, more than 80% of all the lemon oil used in the United States is Exchange Lemon Oil!

This overwhelming endorsement by the trade is your guarantee that Exchange Lemon Oil delivers *quality*... quality in the form of superior *flavor* and unmatched *clarity* and *uniformity*.

Always specify it by the brand name when you order— Exchange Oil of Lemon. For complete satisfaction, accept no other brand.

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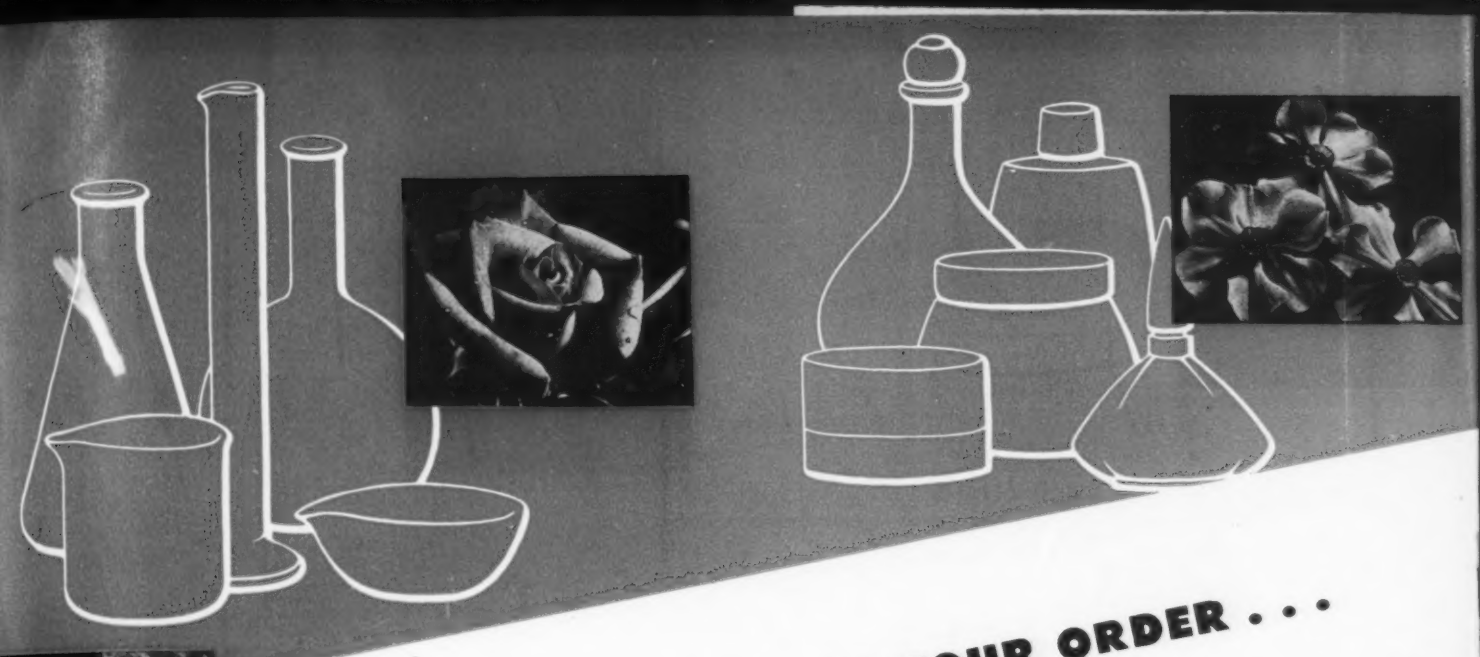
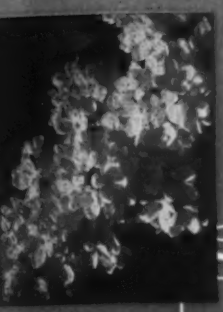
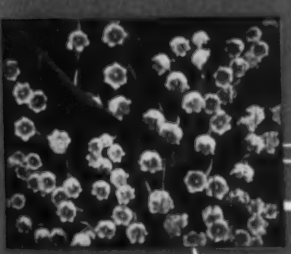




FRAGRANCE - TO YOUR ORDER . . .

Are you planning a new line? . . . . or a new fragrance for your product? If so, the chances
certain definite ideas as to the type this new perfume should be. It is our business, as a
terpret such desires correctly and to translate them into material compositions that captur
and mood satisfying to your need. To fall short of that goal — or to offer ready-made
lieu of applied laboratory effort — is to render poor substitutes for planned creative
unfailing practice, when given details of a customer's requirements, to spare neither tir
laboratory's search for a sure-to-please solution to the specified problem. That is why a
is usually one tailor-made to the buyer's order. Let your next new fragrance be by FR
your order!



CREATORS of MADE-TO-ORDER FRAGRANCES
for PERFUMES, TOILETRIES and COSMETICS

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ODORANTS and DEODORANTS for INDUSTRIAL and TECHNICAL USE

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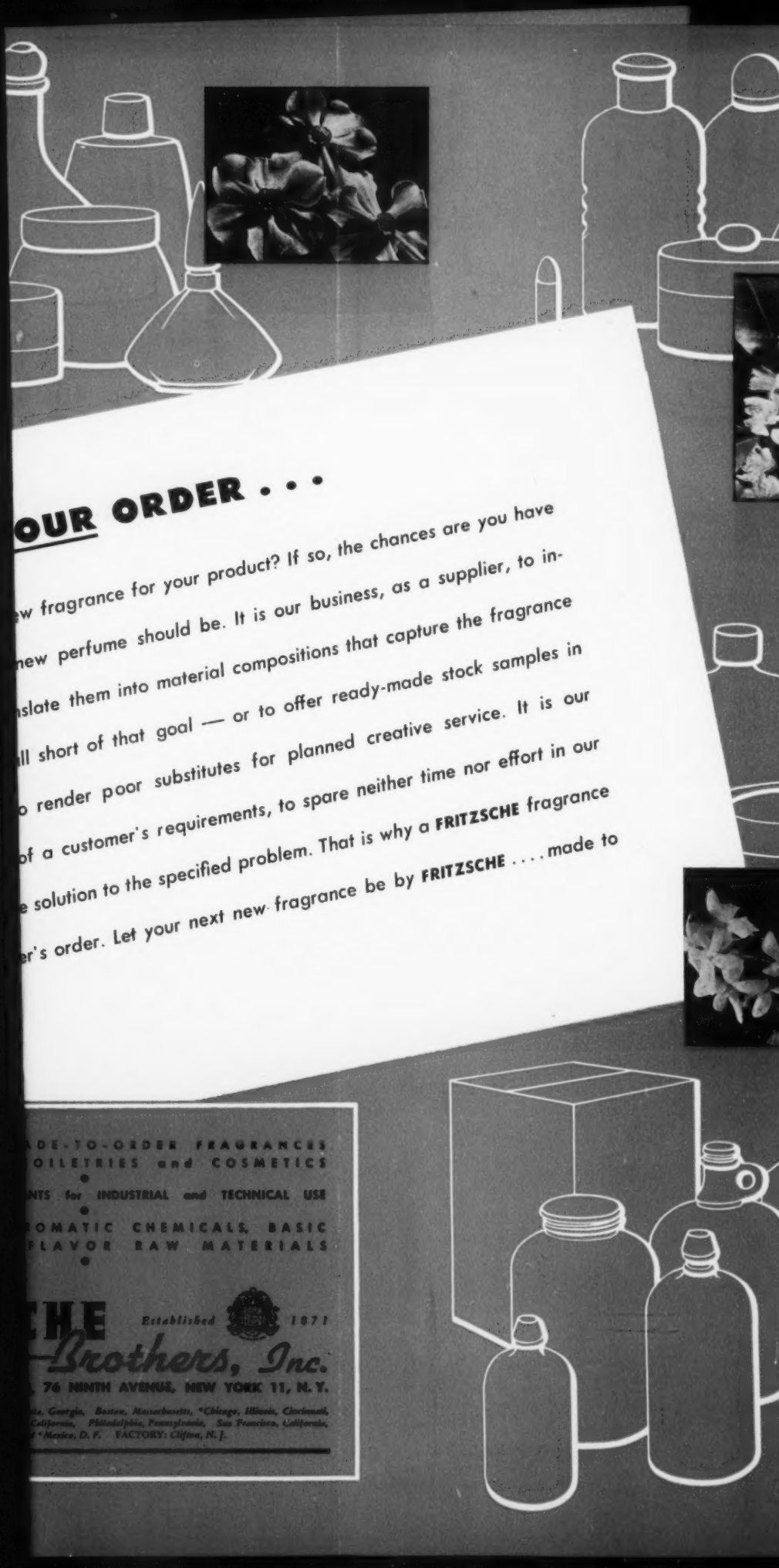
BRANCH OFFICES and *STOCKS: *Atlanta, Georgia, Boston, Massachusetts, *Chicago, Illinois, Cincinnati, Ohio, Cleveland, Ohio, *Los Angeles, California, Philadelphia, Pennsylvania, San Francisco, California, *St. Louis, Missouri, †Toronto, Canada and *Mexico, D. F. FACTORY: Clifton, N. J.


OUR ORDER . . .
w fragrance for your product? If so, the chances are you have
new perfume should be. It is our business, as a supplier, to in-
nslate them into material compositions that capture the fragrance
ll short of that goal — or to offer ready-made stock samples in
o render poor substitutes for planned creative service. It is our
of a customer's requirements, to spare neither time nor effort in our
e solution to the specified problem. That is why a FRITZSCHE fragrance
er's order. Let your next new fragrance be by FRITZSCHE . . . . made to
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OILETRIES and COSMETICS
NTS for INDUSTRIAL and TECHNICAL USE
OMATIC CHEMICALS, BASIC
FLAVOR RAW MATERIALS
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Georgia, Boston, Massachusetts, *Chicago, Illinois, Cincinnati,
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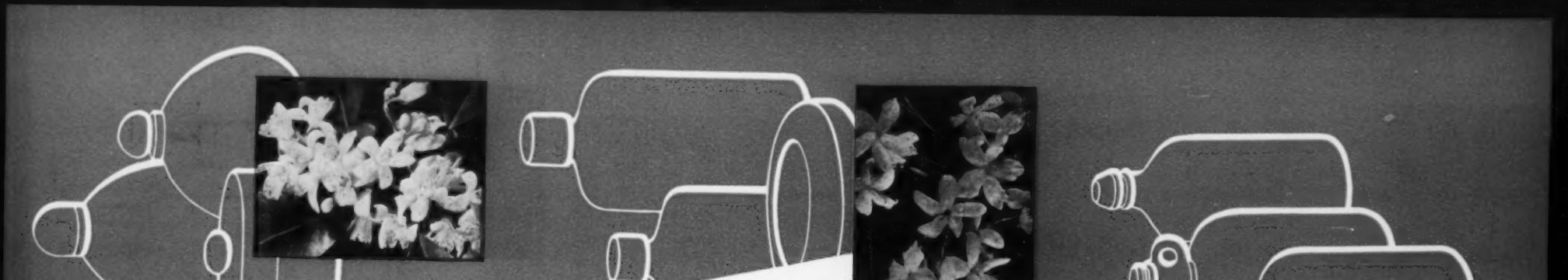
*Mexico, D. F. FACTORY: Clifton, N. J.



KEPT PROMISES PAY OFF....

NEW — FRESH — ORIGINAL . . . . Magnetic words, these . . . . they catch the eye, quicken the imaginative pulse and excite the curious. They *demand* attention! And having whetted interest in something *new, fresh* and *original,* there's an obligation to deliver. Oftentimes, however, the substance behind these "hook" words is all-too-flimsy. Word-magic does its job, but the product fails of its promise . . . . In our industry, there is little reason for arousing interest, curiosity and imagination about our products and then failing to satisfy. Certainly, few industries offer more immediate reward for freshness and originality of thought than that embracing the manufacture of perfumes, toiletries, cosmetics and soaps. And few possess greater sources of inspiration, not only in the manufacturing organizations themselves, but through the creative and cooperative support of their able, service-minded packaging and raw material suppliers. A continuing and receptive alliance between progressive manufacturer and conscientious supplier is this industry's best insurance of newness, freshness and originality of product . . . . *of kept promises that will pay off!*

FRITZSCHE BROTHERS, Inc.

Pages from Our Perfumer's Notebook—

BASICOL YLANG EXTRA

For Use In: Any composition having natural oil of ylang ylang as an ingredient.

Odor Type: Outstanding duplication of ylang, even to its characteristic top note.

Remarks: Particularly useful now since it is composed of readily obtainable materials independent of the imported oil. Very lasting. Undergoes little change during entire evaporation range. Lacks harsh chemical character of inferior imitations. A proven product; highly recommend it.

WISTARIA #20503

For Use In: Creams.

Odor Type: Strong, intensely sweet floral odor, strikingly characteristic of the flowering plant.

Remarks: An excellent odor for lanolin-base creams. Can be used very sparingly.

GERANIUM SYNTHETIC #17835

For Use In: Perfume formulations for cosmetics.

Odor Type: Duplicates closely the basic characteristics of natural geranium.

Remarks: This fully proven, low cost replacement offers incredible value as a full or partial substitute for the much needed natural oil.

When writing for samples and other details, please address us on your letterhead.

FRITZSCHE Established 1871 **Brothers, Inc.**

PORT AUTHORITY BUILDING, 76 NINTH AVENUE, NEW YORK 11, N. Y.

BRANCH OFFICES and *STOCKS: *Atlanta, Georgia, Boston, Massachusetts, *Chicago, Illinois, Cincinnati, Ohio, Cleveland, Ohio, *Los Angeles, California, Philadelphia, Pennsylvania, San Francisco, California, *St. Louis, Missouri, *Toronto, Canada and *Mexico, D. F. FACTORY: Clifton, N. J.

Bouquet d'Orient

An exotic new perfume oil concentrate.

Its subtly sweet, Oriental character gives it a wide and general appeal.

In two versions:

No. 122 . . . for perfume, toilet water and stick cologne

No. 123 . . . for bath oils, powder and sachet

Samples and prices on request

Bouquet d'Orient

A Specialty of Oriental Character . . . by

AROMATIC PRODUCTS, INC.

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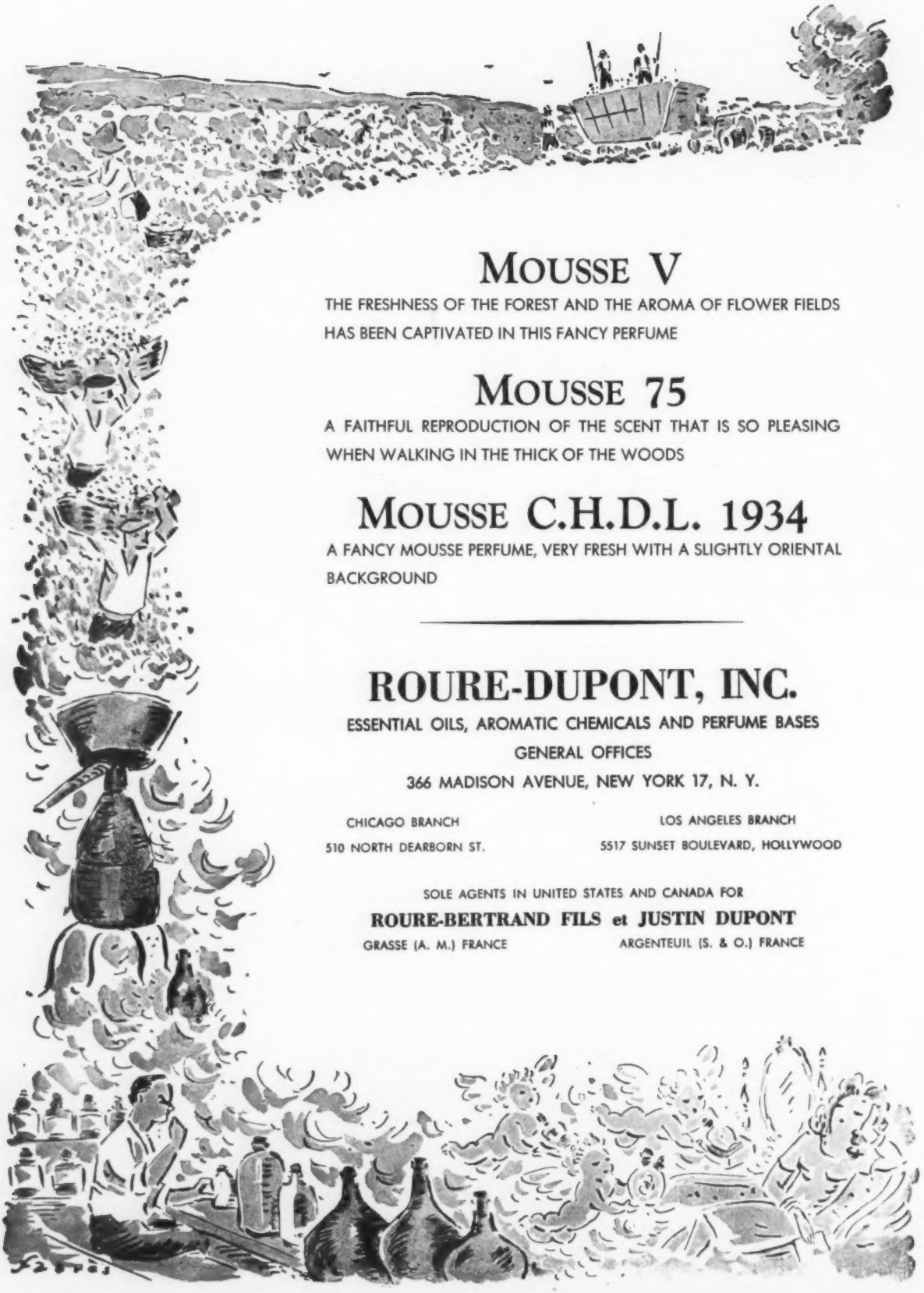

MOUSSE V

THE FRESHNESS OF THE FOREST AND THE AROMA OF FLOWER FIELDS HAS BEEN CAPTIVATED IN THIS FANCY PERFUME

MOUSSE 75

A FAITHFUL REPRODUCTION OF THE SCENT THAT IS SO PLEASING WHEN WALKING IN THE THICK OF THE WOODS

MOUSSE C.H.D.L. 1934

A FANCY MOUSSE PERFUME, VERY FRESH WITH A SLIGHTLY ORIENTAL BACKGROUND

ROURE-DUPONT, INC.

ESSENTIAL OILS, AROMATIC CHEMICALS AND PERFUME BASES

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510 NORTH DEARBORN ST.

LOS ANGELES BRANCH
5517 SUNSET BOULEVARD, HOLLYWOOD

SOLE AGENTS IN UNITED STATES AND CANADA FOR

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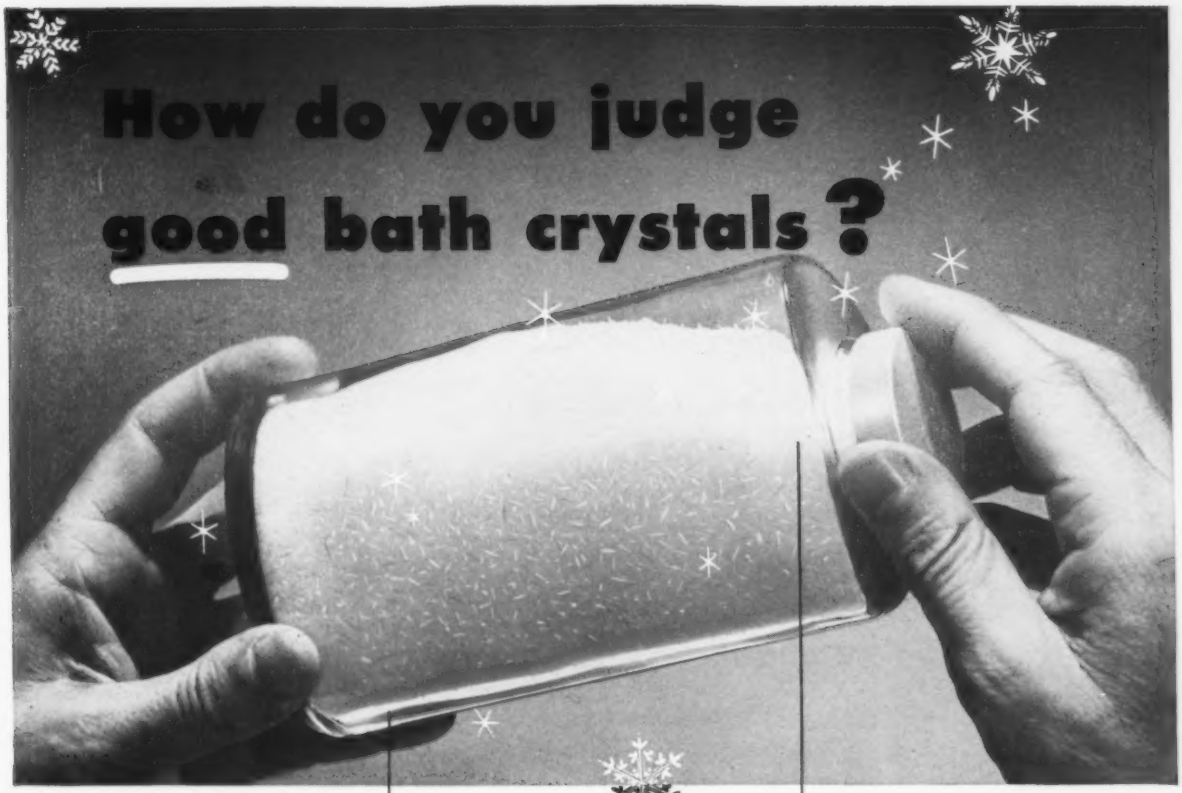


.....By such sales-producing features as sparkling beauty? . . . lovely color? . . . delicate scent? Do you feel that fine bath crystals should have efficient water-softening properties? . . . flow freely from the container? . . . store well?

If these are the standards by which you judge quality bath crystals, then Solvay SNOWFLAKE CRYSTALS are exactly what you want!

The ultimate consumer will be highly pleased with your product . . . and little wonder! Look at all the exciting performance features these scintillating crystals offer.

Start now to build your bath crystals sales . . . use Solvay SNOWFLAKE CRYSTALS for *your* bath crystals.

SOLVAY SALES DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.

BRANCH SALES OFFICES:
Boston • Charlotte • Chicago • Cincinnati
Cleveland • Detroit • Houston • New Orleans
New York • Philadelphia • Pittsburgh
St. Louis • Syracuse

Uniform size and brilliant sparkle in each crystal

Readily absorbs dyes

Takes perfume easily

Dissolves instantly

Softens water promptly and effectively

Will not change physically or chemically in the package

Mild and non-irritating to the skin

Special detergent properties help soap lather better

Non-caking

Low-cost

SOLVAY
TRADE-MARK REG. U. S. PAT. OFF.

*Snowflake** *Crystals*

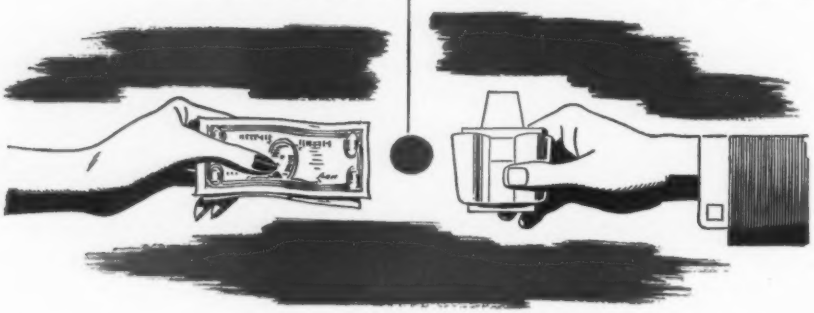
FOR BATH CRYSTALS

* Reg. U. S. Pat. Off.

Soda Ash • Caustic Soda • Caustic Potash • Chlorine • Nytron
Potassium Carbonate • Calcium Chloride • Sodium Bicarbonate
Specialty Cleansers • Sodium Nitrite • Ammonium Bicarbonate
Para-dichlorobenzene • Ortho-dichlorobenzene • Formaldehyde
Monochlorobenzene • Methanol • Ammonium Chloride

Point of Sale

PROVING GROUND OF PRODUCT QUALITY



Here is a tried-and-true way to make your line even more *marketable* and *profitable* . . . use pure, stable Verona aromatic chemicals for your bases. Then your perfumes, creams, toilet waters or soaps will reach the point-of-sale . . . *proving ground of quality* . . . just as you made them . . . with their fragrances as flower-fresh and appealing as when they left your plant.

Verona specialties

amuskal	For freshness and life in your compound, add 1/10% to ¼% Amuskal. Produces natural Tonquin Musk effect.
ambre e-342	Add 2% to 3% of this characterful Ambre to produce the deep, sweet Ambre note for your perfume's appealing final effect.
opoponax ambre e-392	Indicated in fragrances of Oriental type; adds piquancy to the Ambre note. Use from 2% to 5%.
aldehyde e-317	Provides the top note to the first arresting fragrance. Add only ½% to 1% for surprising results.

cyclamal • rose e-131 • ionones • floranol

SOLE AGENT IN THE U. S. A. FOR J. & E. SOZIO, GRASSE, FRANCE

MOUSSE DE CHENE ABSOLUTE • MOUSSE DE CHENE BRUT
STYRAX • OLIBANUM • OPOPONAX • TOLU • RESINOIDES

VERONA

AROMATICS DIVISION

VERONA CHEMICAL COMPANY • 26 VERONA AVE., NEWARK, N. J.

"The bonds William and I bought for our country's defense helped build a house for us!"

HOW U. S. SAVINGS BONDS PAID OFF FOR MRS. ROSE NYSSE OF BRISTOL, PA.

"There's nothing more wonderful than a house and garden of your own," says Mrs. Nysse. "And there's no surer way to own one than to save for it through U. S. Savings Bonds and the Payroll Savings Plan!"

Mrs. Rose Nysse says, "In 1942 William and I started making U.S. Savings Bonds a part of our plan for financial security. I joined the Payroll Savings Plan at the Sweetheart Soap Co. where I'm a supervisor, and began buying a $100 bond each month. I knew that my money was safe and working for me all the time. Buying U. S. Savings Bonds is one of the surest, safest savings methods!"

"Savings Bonds alone made a $5,000 down payment on our house!" says Mrs. Nysse. "Altogether, we've saved $8,000 just in bonds bought through Payroll Savings, and we're keeping right on with the plan. And when we retire, our bonds will make the difference between comfort and just getting by. Bond buying is a patriotic and practical way of building a cash reserve!"

You can do what the Nysses are doing —the time to start is now!

Maybe you can't save quite as much as William and Rose Nysse, maybe you can save more. But the important thing is to *start now!* It only takes three simple steps.

1. Make the big decision—to put saving *first*—before you even draw your pay.

2. Decide to save a regular amount *systematically*, week after week, or month after month. Even small sums, saved on a systematic basis, become a large sum in an amazingly short time!

3. Start saving automatically by signing up *today* in the Payroll Savings Plan where you work or the Bond-A-Month Plan where you bank. You may save as little as $1.25 a week or as much as $375 a month. If you can set aside just $7.50 weekly, in 10 years you'll have bonds and interest worth $4,329.02 cash!

You'll be providing security not only for yourself and your family, but for the blessed free way of life that's so important to us all. And in far less time than you think, the financial independence the Nysses enjoy will be yours to enjoy as well!

FOR YOUR SECURITY, AND YOUR COUNTRY'S TOO, *SAVE NOW*— THROUGH REGULAR PURCHASE OF U. S. SAVINGS BONDS!

Your government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America as a public service.

WHAT MAKES A GOOD AD SELL?

What are the basic ingredients of an ad? What makes it touch the hearts—and pocketbooks—of people the world over? Now, in this unique book, you will find reproductions and case histories of 100 ads that did what they were intended to do and gained permanent fame.

You will see 100 of the all-time greats of advertising. Already advertising's bestseller, certain to become a classic in every adman's library.

SOME OF THE 100

- 99 44/100% Pure
- You Press the Button, we do the rest
- Spotless Town
- His Master's Voice
- Uneeda Biscuit
- The Camels are Coming
- Kiddie Kar
- The Ayer House Ads
- The Instrument of the Immortals
- Down from Canada came tales of a wonderful beverage
- A $10,000 Mistake
- Again, she ordered chicken salad
- Written After Hours
- The Lux Toilet Soap Story
- The Tin Lizzie Becomes A Lady
- That's a hell of a way to run a railroad
- Phoebe Snow
- Do you make these mistakes in English?
- Jim Young's Odorono Story
- Look at All Three
- Never underestimate the power of a woman
- Salada Tea
- Macy's Great Christmas Ad
- Often a Bridesmaid, but never a bride
- The Kid in Upper 4
- Somewhere West of Laramie
- Tell it to Sweeney

—and 72 others you ought to know about

WHO WROTE THEM AND WHAT THEY DID

In this volume, which is the result of years of research, interview, correspondence and vote, you will find a commentary on who wrote them, what they did and why they sold the merchandise or ideas they were expected to sell. Some of the commentaries were written by the copywriters themselves, explaining the growth of the idea and how they created it.

"A WEEK'S PAY"

As Raymond Rubicam says in his Introduction: "When I began as a copywriter, a book like this would have been worth more money to me than I owned. A week's salary would have been a bargain price."

Check other ads you've seen and compare them with the 100 compiled by Mr. Watkins. Read what genius made these ads click and live. Find the answers to many other questions about good advertising in this unique and handsome volume.

THE 100 GREATEST ADVERTISEMENTS

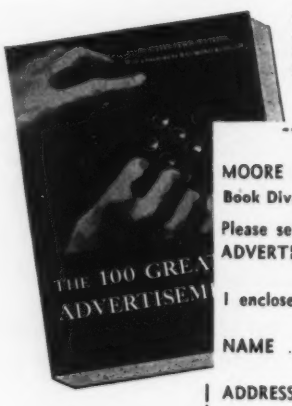
by

Julian Lewis Watkins

(*with an introduction by Raymond Rubicam*)

214 pages, 8½ x 11, 100 illustrations, $6.00

This book brings you a guide upon which you can evaluate advertising effectiveness. A "must" in your reference library if you make, buy, sell, teach, or study advertising.



Send for your copy of "The 100 Greatest Advertisements" now. You'll find it fascinating and *useful* reading. Clip and mail the coupon today!

MOORE PUBLISHING CO., INC.,
Book Div., 48 W. 38th Street, New York 18

Please send me ..... copies of THE 100 GREATEST ADVERTISEMENTS. Price per copy six dollars ($6.00).

I enclose check for $.....

NAME ..... FIRM.....

ADDRESS ..... POSITION.....

CITY ..... ZONE ... STATE.....

"Bond purchases fill a continuing employee need . . ."

C. E. WILSON
President, General Motors Corporation

"Our Payroll Savings Plan, which was inaugurated pre-Pearl Harbor, has continued without interruption in war and peace. It is our experience that employees benefit personally as well as economically from such cultivation of the habit of thrift."

In General Motors, employees have to date purchased more than $841,000,000.00 maturity value of Bonds through the Payroll Savings Plan.

Inaugurated largely for patriotic reasons in August 1941, the plan proved so helpful in meeting an employee need that GM decided to continue it as a regular part of its employee program.

The experience of General Motors is paralleled by that of many other successful organizations. In upwards of 21,000 large companies today, more than 8,000,000 Americans are investing $150,000,000 in U. S. Savings Bonds every month.

Every Payroll Savings Plan is of direct benefit to the country, the company, and the employee. It is the one way of insuring our strength as individuals and as a free people.

Employees *want* the Payroll Savings Plan. If you do not offer your people the plan . . . or if you have not made a person-to-person canvass recently—phone, wire or write to Savings Bond Division, U. S. Treasury Department, Suite 700, Washington Building, Washington, D. C. Your State Director will contact you to explain the simple pattern of the person-to-person canvass and supply you with application blanks, posters, pay envelope enclosures and other helpful material.

Act now—to help your employees, your company and the stability of the American economy.

Recent increases in employee participation in the Payroll Savings Plan following person-to-person canvasses:

Hotpoint, Inc., Chicago, from 8.7% to 96% of 9,000 employees . . . Standard Oil of Indiana (Illinois; 26,175 employees), from 32.3% to 79.1% . . . Kelly Springfield Company (Maryland; 2,000 employees), 46.8% to 83.3% . . . A. M. Byers Co. (2,500 employees). 26% to 91% . . . Crucible Steel Company (14,500 employees) reinstatement of plan, 65%. Consolidated Western Steel Corporation (California; 7,528 employees) 9.3% to 84.8% . . . Wisconsin Electric Power Co. (3,000 employees) 44.3% to 73%.

The U. S. Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, The Advertising Council and

Sheffield—first to put toothpaste in tubes, in 1892—has served packagers for over half a century in producing billions of tubes for—

MEDICINAL ointments — salves — jellies—extracts.

DRUG AND COSMETIC pastes—creams — shaving preparations — deodorants — depilatories.

INDUSTRIAL AND HOUSEHOLD cements—adhesives—compounds — greases — paints — fillers — food pastes, syrups, and creams.

All types of tin, tin-coated, aluminum, lead, and Sheffalloy tubes. Free samples and catalog. Remember, packaging in Sheffield Tubes gives your product a container that is . . . Sturdy • Safe • Sanitary • Smart Convenient.

Three Big Advantages of Using An Independently-Owned Company

1. *Your Order Is Important Regardless of Volume*
   Sheffield's business has prospered through dependable service to everyone. Small, medium, and large volume users all receive the same impartial and loyal service.
2. *You Benefit Through Wider Research*
   Sheffield has always sold to everyone on the open market. Consequently, Sheffield has the experience of wider association and research in all phases of tube packaging in hundreds of specialized fields.
3. *You Put Proven Know-How On Your Team*
   Quality Control methods, continuity of skill in manufacture, and generations of packaging experience are at your instant call.

Only Sheffield offers such a complete service: tube manufacture, supply of matching tube cartons, shipment of your completed products direct to your markets. Specify *Sheffield Tubes.* It *pays* to use the best.

THE SHEFFIELD TUBE CORPORATION

HOME OFFICES · NEW LONDON, CONN.

W. K. SHEFFIELD, V. P. CHARLES ARCH T. C. SHEFFIELD

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EXPORT: 500 FIFTH AVE., N. Y. CABLE "DENTIFRICE", NEW YORK

New England SHEFFIELD PROCESS TUBES

Desiderata

by MAISON G. deNAVARRE, F.A.I.C.

M. G. deNavarre at work in his laboratory

Expensive Patent Suits

It is a revelation to learn from the Patent Equity Assn. that the "average" cost of patent litigation came to $90,000 or a shade better. The lowest figure reported was $5,700, with a number reporting $15,000, $20,000 and $25,000, with the highest being $300,000.

This makes it almost a misfortune to be a recipient of a U.S. patent because of the high cost of prosecuting infringement. Not being a patent attorney I don't know the cause of this high cost but certainly those in our government entrusted with the job of protecting small businesses ought to take a look at it because even the lowest figures mentioned would be a blow to some small businessmen. The feeling a little fellow gets after receiving this kind of information is that the cards are all on the side of the big boys who can freely trespass if they so desire because the little guy isn't in a position to protect himself.

Fat Spoilage

The Hormel Institute of the University of Minnesota, has just issued its annual report summarizing the work accomplished during the past year.

One of the projects covers the study of the course and mechanism of the autoxidation of fats which resulted in the isolation of the peroxides formed and a colorimetric method for their estimation using stannous chloride. A lot of studies on the nutritional requirements of swine are also reported.

Another study covers the use of natural spices as antioxidants including all of the well known spices, 32 in all, starting with allspice and ending with turmeric. Virtually all the samples showed some antioxidant activity. The work is being continued.

Another project covered the study of the antibacterial properties of butylated hydroxy anisole in which two well known bacteria were used. It appears to be impossible to get enough BHA into solution to be lethal or inhibitory against the organism used, although the material does possess the antiseptic properties in question in concentrations of approximately 0.05 per cent. This casts a new light on fats containing BHA as an antioxidant which may potentially acquire antiseptic properties as well.

Theory of Olfaction

Those having an academic interest in the factors that enable us to smell things will be interested in these quotations from an article by Forrester and Parkins, *Science, 114, 5, 1951.*

"Beck and Miles (1) have proposed an ingenious explanation for the sense of smell, based on differential radiation losses by the receptors responsible for the function. . . . They substantiated this theory by experiments performed on certain insects ideally suited for the purpose because of their external olfactory receptors. The difficulty of performing their experiment . . . led to an indirect confirmation of the theory.

"A gas in an opaque chamber will approach temperature equilibrium with the walls, a state in which the radiation absorbed and that emitted by the gas are of identical nature. If an odorous gas were enclosed in an opaque chamber at body temperature for a sufficient length of time to come to equilibrium with the chamber walls, and then inhaled through an opaque tube, also at body temperature, the radiation to the walls of the nasal passages would be unchanged. If the theory of Beck and Miles, as interpreted above, is correct, no sensation of smell would be produced, whereas according to the old explanation based on a chemical reaction induced in the nasal passages, the smell would be relatively unaffected by the temperature of the gas.

"In an experiment involving this principle, the sensation of smell showed no evident dependence on the temperature of the gas inhaled. The procedure was to submerge a collapsible rubber tube, and the observer's head, with a small attached diving mask, in a reservoir of temperature-controlled water. Air mixed with vapor of cloves in the rubber bag was inhaled by the observer after he had remained submerged for several minutes, during which time breathing took place through a separate tube. . . . In a second test the vapor of cloves was inhaled through the mouth, held in the lungs for 15 seconds or more, and exhaled slowly through the nose. The odor of cloves was easily discernible in the exhaled vapor despite the fact that the vapor was very close to body temperature."

Karaya Preservatives

In the past year or so this department has received numerous requests for a suitable preservative for 1 per cent gum karaya mucilage when packaged as a finger wave fluid. The correspondents claim that all of the usual preservatives are incomplete in their effect or gradually become inactivated.

In discussing this one day with Dr. Emil Klarmann he said that his company produced a material known as sodium para-chloro-meta-methyl phenate, which he thought would be effective in a concentration of 0.1 per cent (1:1000).

Emil Klarmann, however, never makes a positive statement about anything until he has made the necessary tests and that is exactly what he proceeded to do; just the other day I received a letter from him telling me that the material is effective in the concentration stated after tests have been performed.

So, those of you who have been plagued with the problem now have a solution to it. Thanks, Dr. Klarmann.

Questions and Answers

887: Waterless Hand Cleaners

Q. There are a smaller number of fell type waterless hand cleaners on the market which do not contain ammonia, and it is this group in which I am interested. Most of these I understand, consist basically of water, kerosene (or Stoddard solvent) and two other liquid materials—one of which is water soluble and the other soluble in petroleum solvent. If you would have any recommendations or suggestions as to how a cleaner such as this might be prepared, I would certainly appreciate hearing from you. I am enclosing a stamped, self-addressed envelope for your convenience in replying. *D.C.P. Iowa*

A. You can use sodium hydroxide to form sodium stearates and therefore gel your hydrocarbon. Others use methyl or carboxyl methyl cellulose for the purpose. Still others use bentonite. One non-ionic surfactant can be diluted with water and otherwise treated to give this type of hand cleanser. Obviously it is possible to make a mixture from these several varieties.

888: Non-Sensitizing Perfume

Q. Our problem is this: We make products specifically intended for sensitive skins. It is well known that perfume oils are irritating to some people, and yet an unperfumed cosmetic is so unappealing. We are wondering, therefore, if certain perfume oils might not be known to be appreciably less irritating than others. *A.M. Oregon*

A. Certain essential oils are known to be skin irritants or sensitizers. These include such oils as cinnamon, bitter almond, clove, balsam of Peru, and orris to name but a few. In addition, aldehydes and phenols as a group are among the aromatic chemical compounds tending to irritate all skins. Perfume oil compounds made from any of the afore-mentioned ingredients could be sensitizing. The fact that a soap is usually washed off the skin soon after its use tends to reduce the sensitizing effect of the fragrance. Most perfume compounders know pretty well the materials that irritate skin so that if you present your problem to them we are sure you can come up with some satisfactory fragrances. If, however, you want further information, please let us know.

889: Polyol

Q. In Your article on "How to Make Solid Colognes," you suggested using Polyol in one of the formulae. Will you kindly tell me what it is and where it can be obtained, as I am not familiar with it. *G.B.R. Arizona*

A. Polyol is the generic name for organic compounds having more than one hydroxyl group particularly in the aliphatic series. It covers such ingredients as the glycols, glycerin, sorbital syrup, etc.

890: Formaldehyde Deodorizer

Q. Once again I have the pleasure of asking for your assistance on the formulation of an air deodorizer of the simple type, using mainly water and formaldehyde. We have a request for a milky product with a pine odor and are having a little difficulty in attaining a good odor and a good dispersion of the essential oil. Could you perhaps suggest a working formula? *F.O.F. Penna.*

A. We would suggest that you develop your deodorizer from a mixture comprising of four to five ounces of formaldehyde per finished gallon of product. You can add a solubilized perfume oil which you make yourself or you can try some of the tested solubilized products made by a number of houses.

891: Dental Cleanser

Q. You would oblige me a great deal if you could let me have several formulations for a good Denture Cleaning composition in powder form. It is intended for use as an overnight cleaner for dentures left in glass of water etc. It should, if possible, have the following qualities:

1. Very strong detergency
2. Stain removal power
3. Bactericidal power
4. Stability in storage
5. Easiness in rinsing away
6. More or less good taste (facultative). *R.S.P. France*

A. The best denture cleaning composition will consist of about 90 per cent or more of trisodium phosphate or sodium tetropyrosphosphate or a similar polyphosphate. The balance may consist of a surface active agent of the alkyl aryl sulfonate type. If available in France, you may be able to use some cationic agents that are compatible with the phosphate as bactericides. Since the denture is placed in a glass containing a solution of the above substances, and since it is rinsed completely after brushing before replacing into the mouth, taste does not enter into the picture.

892: Bathing Preparation

Q. In reply to our request relative to our need for a bathing preparation it is not a bubble bath we desire, however, the bubble bath products appear to contain ingredients which results in foamy suds but do not have any cleansing ability. Many of the bubble bath products contain only perfumed salts, such as Snow Flake Crystals. This type does not interest us. We want something with cleansing action that is buffered and can be sold as a liquid. *A. S. Y. New York*

A. Replying to your letter of recent date regarding bathing preparations, it appears that your best bet is to use some non-ionic preparation which would contain a buffer on the acid side. Boric acid, is a good one as are citric and tartaric acids. Sodium metaphosphate is another good one. We believe there are some other phosphates which have a pH just on the acid side, which could also be used. Beyond this we have run out of suggestions.

There is a growing market for cosmetics on farms in every state.

The Farm Cosmetic Market

Farmers have an income of $125 billion. . . . One out of every five persons in the U. S. lives on a farm. . . . What cosmetics are most wanted by farm women and how they make their purchases.

ALBERT WOODRUFF GRAY

THE farm population of this country today is approximately twenty nine and a half million, 19.5 of the total population of 151,399,000. A shift has occurred during the past ten years to the cities and more densely populated areas until today three of every five of the people are in the cities and one of the remaining two is living on a farm and the other engaged in a rural non-farming activity.

Farm Capital and Income Up

While the proportion of those engaged in agriculture has declined, both farm capital and income has had an unprecedented growth. Gross farm income for the five years of 1935 to 1939 averaged twelve and a half billion dollars. By 1950 this income had increased to $123 billion, almost ten fold, with the average individual income of the farmer in 1948, according to the Census Bureau, $1,814 a year.

The financial situation of the agricultural worker has had a phenomenal change since 1940 when, according to one writer, there were no more farm experts in advertising departments than there were advertising experts on the farms. The farm population of those days was a negligible factor in cosmetic merchandising. Today it is a market with a hundred and a quarter billion dollar income.

Most Farm Women Use Cosmetics

A survey of the farm cosmetic market made in March of this year by the Progressive Farmer shows 99.6 percent of the farm women of the southern states today using cosmetics, with 94½ percent of these women buyers of four or more different items, a substantial gain in the proportion of users of cosmetics over the past three years.

The greatest increase in sales to this class of buyers occurs in the distribution of detergents and lipsticks, a growth of 10 percent since 1948. In 1948 lipsticks were used by 74.3 percent of the women on the southern farms. In the survey made in the spring of 1951 of this same section of the country, the users of lipsticks had increased in number to 82.7 percent of this class of women buyers.

On farms in the midwest in 1948 the proportion of lipstick users was 71.8 percent while two years before, in 1946, a survey of Iowa farm women users, made by Wallace's Farmer, reported only 58 percent users in that

Women on farms, being more exposed to weather than their city cousins, have even more reasons for using all types of cosmetics.

area and in the Wisconsin area, according to a survey of the Wisconsin Agriculturist this proportion was but 57 percent.

Of face creams, 71.2 percent were users this spring in the southern states compared to 83.5 percent between two and three years ago. In this late survey however, over half of the users of face cream restricted their selection to two brands, while in 1948 the choice of only 10 percent was confined to two brands.

In the Kansas area, according to *Capper's Farmer,* the number of face cream users is 53 percent of the farm women. In Iowa the proportion is 78 percent and in Wisconsin 71 percent.

All purpose cream in the southern states claims as users 56.6 percent of the farm women, a slight advance from the 55.2 percent representing the number of users in 1948.

Foundation cream in the midwest section of the country in 1948 was used by 34.6 percent with only two brands the choice of over 10 percent of these users, while miscellaneous brands, brands preferred by five or less, were the choice of 28 percent.

Hand creams in the spring of 1951, were purchased by 58 percent of the farm women of the south, a decline in buying of 5 percent of this type of cosmetic from the percentage of users disclosed by the survey made between two and three years before.

In the middle west the proportion of users in 1948 of this type of cosmetic was 32.1 percent among farm women, a third of these confining their choice to two leading brands, and two thirds with preferences for fifty different and less popular brands.

Of the other face creams in this locality in 1948, vanishing cream was used by 29 percent, cold cream by 53 percent and cleansing cream by 40 percent of the farm women.

Use of Perfumes Increasing

In 1948 perfumes were used by 47 percent of the middle west farm women and toilet water by 25 percent.

Three years ago 93.1 percent of the southern farm women used face powder with acknowledged preferences by 85.5 percent for over 146 different brands and only 14.5 percent of these confining their choice to one brand. Between two and three years later the proportion of face powder users in this locality had increased to 95.9 percent with preferences for slightly less than half the array of brands expressed by this class in 1948.

In 1946 in Wisconsin the proportion of users of face powder among farm women was substantially the same as in the south, 92 percent, in the Iowa section of the country 94 percent and in Kansas the proportion of users dropped to 87.9 percent.

Rouge in 1946 was a toilet accessory of 65 percent of the farm women in Wisconsin and the same proportion in the Kansas area, 10 percent using cream and 55 percent cake rouge. In the south the proportion of rouge users increased to 74.3 percent with a preference of 75 percent of these users scattered over 125 different brands and the remaining 25 percent restricted to two brands.

Dentifrice tooth paste in the middle west possesses a decided preference with farm women over powder, 74 percent using the paste.

Mouth wash in the Kansas area is used by 60 percent of the farm buyers, two thirds confining their preference to one brand, the other third expressing a preference for thirty three different brands of mouth wash.

In the southern states the proportion of users of this type of cosmetic is markedly greater, 73 percent, but with the same proportion of users in brand preference as in the midwest market.

Hand lotions in the Kansas section of the country are used by two thirds of the farm women, 40 percent of these confining their choice to one brand and 60 percent to 67 different brands. In Wisconsin 77 percent of the farm women are users of hand lotions and in Iowa the proportion of users of this cosmetic rises to 83 percent.

In the south hand lotion consumption by farm women is slightly greater than in the north, 88.7 percent in 1948 and 88.2 percent at the present time. Substantially half of the users, both in the southern and midwestern farm areas restrict their hand lotion preference to one leading brand.

Nail polish is used by 31 percent of the Wisconsin farm women while in the Kansas area it is used by over half of the women of the agricultural districts and in the southern states the proportion in 1948 was 53.2 percent which has increased to 55.6 percent at present, nearly double the number of users on the farms of the north central section of the country. Three well known brands of nail polish represent the preference of approximately 70 percent of the women on the farms of the south and central states.

Recent Surveys Significant

A survey made between three and four years ago by the *Farm Journal* of the use by farm women of hair tonic, disclosed that over 51.6 percent of those above 18 years use hair tonic regularly and 38.2 percent occasionally, while of those under that age 45.7 use this item regularly and 36.4 percent at varying intervals, a total of 82 percent among the teen-agers and 89.9 percent of the older women.

A survey of hair tonic users among the farm women of Kansas and the middle west made two years later shows a marked difference, only 46.5 percent of the women residing on farms at that time being listed as users.

In the retail distribution of cosmetics a noteworthy feature is the present shift in the retail source at which farm women secure their cosmetics. In a survey made this year by the *Progressive Farmer* magazine, the women interviewed were asked to state the type of store or distributor from which she purchased her cosmetics before buying at the present source. By these statistics it appears that drug stores formerly enjoyed 55.9 percent of this trade in place of the present 44.1 percent and house to house selling 9.4 percent instead of the present 19.4 percent.

This same trend of trade from drug stores to house to house salesmen appears in these marketing figures of various cosmetic creams. The former 52.9 percent of the purchases of this item from drug stores declined this year to 42.5 percent, while house to house selling increased from a former 6.8 percent to today's figure of 16.7 percent.

The drug store sales of lipsticks formerly represented 57 percent of the sales of this type of cosmetic to farm women and house to house selling 8.1 percent. In the spring of this year drug stores were credited with but 44.8 percent of these sales and house to house selling with 21.5 percent.

What Happens to 1000 Prospects

HAND in hand with success, it seems, goes complacency observes *Memorandoms.* "We know our customers," successful management often says, "and they know us. We don't need advertising like the new, little fellows in the business."

You don't? Take a look at some recent figures from McGraw-Hill on what happens to 1,000 of the men who "know you" every year:

300 new faces replace transfers to companies in *different fields,* retirements and deaths.

66 change titles in the same company.

131 shift to different locations (with the same or a competitive company.)

Out of the thousand you started with, only 503 stay put.

Those figures are for normal times, and are based on 1946-1949 averages.

Under emergency conditions, look what happens: ONLY 371 STAY PUT.

One large national industrial advertiser found that, in 1949, 39% of its *customers* were not previously known to it—they were not even on lists provided by its own distributors.

Your prospects don't know you as well as you think they do.

Why a Woman Buys Anything

SPEAKING of selling, you know, says Frederick Schneller, general merchandising manager of Lever Bros. Co., there are really only eight reasons why a woman buys anything:

1. Her husband says she can't have it.
2. It makes her look thin.
3. It comes from Paris.
4. Her neighbors can't afford it.
5. Nobody's got one.
6. Everybody has one.
7. It's different.
8. "Because."

Importance of Credit

MAN is the greatest invention of God. Credit is the greatest invention of man.

Credit granting, most fascinating of human occupations, exercises the finest traits of human character—courtesy, consideration, trust, confidence, integrity and reliability.

Remember, and never forget, consumer credit has done more to elevate the standards of human life and done more to develop the finer traits of human character than any other invention of man.—*B. J. Lenihan.*

Tie-in Cosmetic Advertising

THE tired bromide that two can live as cheaply as one—but only for half as long—has been neatly twisted around by agile advertising minds to serve a new and utilitarian function. The revised theory: two can advertise as easily as one—and for only half the price. In the last year, it has been put to work more than ever before.

In essence, this has come to mean that two (sometimes more) advertisers may find it expedient to pool their art and copy in a single advertisement to plug themselves, each other or even a third product (in which each of their products is a necessary element). In practice, it means that two advertisers can buy such a color page and share the cost. It means costly color display at a fraction of its list cost, and it may constitute a new approach to advertising.

This sort of you-scratch-my-back advertising is hardly revolutionary, nor is it particularly new. Manufacturers with many products (General Foods, General Mills, American Dairy Assn., Kraft Foods) have often given "hitch-hikes" to any number of their brand goods in a single ad. But the practice of two independent manufacturers of related items coming together, is something else again.

Macfadden Publications' True Story Women's Group carried a three page gatefold in its June publications. The insert contained 12 separate advertisements, four to a page, placed by a dozen non-competitive manufacturers of beauty aids all tied together with the theme "True Cover Girl Beauty." The advertisers were: Maybelline, Suave, Fresh, Woodbury, Westmore, Northam Warren, Bymart, Procter & Gamble, Solitair, Noreen, Pepsodent and Breck. The insert was in color and special editorial text on each advertiser was written by the beauty editor.

There is a division of opinion as to the advantage of tie-in advertising. Too many products in one package some feel can have an effect on the consumer of not being able to see the trees for the forest. Some regard tie-in advertising with enthusiasm. One said "Pipe and tobacco—what's wrong with that—and how about adding a pouch?" Other publications are studying the trend.—*Tide.*

The Vacation Idea

A LOT of us do not take vacations seriously enough, nor enough vacations; they are too short and too far apart and too much alike. We are such creatures of habit that we cannot really get into the vacation spirit under a week or so. Then we try to do too much in too short a time.

We find it difficult to relax from the strain of business or profession and get our bearings in a new environment; to get ourselves into harmony with the idea of play; and just when we may have accomplished this, we are hurled back again into the business tread-mill.

If we could stay away from business long enough to get perspective upon our jobs, we should accomplish more. We need to clarify our vision and give scope to our imaginations if we are to become better cosmetic, soap or flavor men.

The old Biblical idea of a Sabbatical year, occasionally, when a man was free to follow the bent of his genius without worry over the details of his business, had much in it to commend it. What a Godsend it would be to most of us who have things on our minds that we would like to get upon paper; some Carcasson that we would visit; or, some Rio we would like to go rolling down to before we are too old.

Market Research Needed

IF we are to mass produce customers on the scale which will be required in the post-emergency years, we will need a trained, coordinated, properly supervised selling force. We need to plan what we wish to sell, how much we wish to sell of a given product, to whom we propose to sell it and how much we will be willing to pay to sell it.

We will need to plan sales by product, by grade and by size, by area and by customer. Such plans do not exist today in any degree remotely approximating our probable need," he declared. "The longer we continue without them, the harder it will be to produce them properly when we must have them or fail."

Management will have to make particularly full and wise use of the tool of market research.

Management must have analyses of markets, of general business conditions, of consumer preferences, of product testing, of statistics useful in public relations. It must measure market potentials, set sales quotas, select distribution channels and plan advertising campaigns designed to reach and help penetrate markets. It must know where sales time is being wasted and how selling operations may be conducted more efficiently.—*D. F. Austin, Executive Vice President U. S. Steel Corp.*

Retirement Practices

IF industry continues its present retirement practices, it will be faced with a seriously depleted labor pool, and top-heavy pension costs. Since the turn of the century, the number of those over 65 has quadrupled while the population has only doubled.—*Dr. Charles Franco, Consolidated Edison Co.*

Cosmetic Excise Tax Collections

COSMETIC excise tax collections for the years of 1949 and 1950 and also the collections for the months of 1951 so far issued are given in the table following:

	1951	1950	1949
January	$12,255,363	$ 9,836,052	$ 9,648,063
February	12,867,842	11,654,681	12,984,776
March	8,534,569	6,811,063	6,796,181
April	5,746,348	6,985,099	6,913,884
May	9,293,461	8,316,993	6,983,445
June	8,622,275	8,136,742	7,625,450
July		7,965,373	6,776,881
August		9,671,335	7,807,221
September		7,542,472	6,859,446
October		7,900,314	6,760,409
November		8,159,612	7,738,779
December		7,781,091	7,312,007

Recent Developments in Cosmetics

Use of penicillin in dentifrices . . . Estrogens in creams and lotions . . . Cold waves . . . Aerosol shampoos . . . Cake make-up . . . Non smearing lipsticks . . . All purpose soap . . . Sun screens . . . Various other developments.

MAISON G. DE NAVARRE, F.A.I.C.*

A skilled research chemist at work on cosmetics.

THIS review starts about the time of the passage of the 1938 Food, Drug & Cosmetic Act. However, two important developments came before that, namely the commercial manufacture of triethanolamine which opened new horizons in the field of cosmetic emulsions; and the other advance came with the introduction of antiseptics into cosmetics to render them self-sterilizing, therefore more hygienic in use.

Antiperspirants

Because of the similarity of the products, antiperspirants are discussed with deodorants, for an antiperspirant, if effective, is usually a deodorant, although a deodorant is not a perspiration inhibitor.

The introduction of Arrid, the first commercial antiperspirant cream, so formulated that it had little rotting effect on clothing, brought into being two new concepts in this field. The first was the fact that the product was an emulsified *cream* antiperspirant, when others were clear aqueous liquids. The perfection of a stable emulsion of electrolytes was an achievement all its own. The second novelty was the use of a so-called buffer, which bound the acid liberated by the aluminum salt as a result of hydrolysis, and prevented its tenderizing action on fabric. This earned U. S. Patent No. 2,236,387 covering the use of urea formamide and acetamide as "buffers." This patent was litigated and invalidated by the U. S. Supreme Court in 1948.

With the introduction of buffers, patents were eventually granted to Montenier,[1] Klarmann,[2] Teller,[3] Richardson,[4] and others,[5] in this country and abroad. The buffers included various derivatives of nitrogen such as amides, imides and nitriles; oxides-hydroxides and carbonates of the alkaline earth metals; alkaline earth metal salts of mono and polycarboxylic acids and aluminum phosphate.

Antiperspirants became static for a while until the development of a basic salt of aluminum chloride, a so-called aluminum chlorohydrate sold under the trade name of Chlorhydrol. In this chemical the ratio of aluminum to chlorine is 2 to 1 instead of 1 to 3 which it is in aluminum chloride. This material had the property of acting slower in its retarding action on perspiration, but it did not tenderize fabric anything like aluminum chloride did. Anderson[6] obtained a patent covering its use in antiperspirant products, which patent is currently being litigated. Aluminum chlorohydrate made it possible to develop the spray underarm deodorant-antiperspirant in polyethylene "squeeze" bottles.

During the last year Jenkins and Christian announced the synthesis and testing of a new chemical known as aluminum methionate,[7] said to have practically no tenderizing effect on fabric and to possess excellent antiperspirant properties. It is not in commercial use yet.

Since deodorants are also included in this review, it is necessary that both G-4 and G-11 be mentioned because they are used in the deodorant colognes and possibly in deodorant creams and lotions as well as in antiperspirant products. These two compounds are chlorinated diphenols with selective antispetic properties, hence preventing sweat decomposition with its byproduct of body odor.

* Abstract of paper presented at AIC 1951 meeting. Published by courtesy of THE CHEMIST.

The latest deodorants are offered in small aerosol bombs for personal use.

Dentifrices

Two forward steps were made in dentifrice formulation in the thirties; they are the patenting and use of sodium alkyl sulfate[8] as a foaming agent and detergent. The other advance was the elaboration of sodium, calcium, and magnesium phosphates as polishing agents.[9] Then fifteen uneventful years went by before a new idea in treating dental caries was propounded by Kesel and others, resulting in the use of the so-called "ammoniated" dentifrice.

The products contain both diammonium phosphate and urea together with foaming and polishing agents, the idea being that in this media, the *Lactobacilli* are inhibited from multiplication and as a result caries resulting from Lactobacilli considerably reduced.

Two schools of thought developed, the so-called high urea[10] and low urea formulas[11] were promoted by each respective group.

The latest refinement in the field of dentifrices is the introduction of penicillin[12] at the rate of 1000 units per gram of dentifrice. At this writing, penicillin tooth powder is available on prescription only.

Penicillin is undoubtedly, the forerunner of other antibiotics to be added to dentifrices.

Facial Products

While all kinds of ideas are constantly being introduced into face creams and lotions formulations, only two really outstanding developments have taken place. The first is the addition of pure estrogens[13] into these products which enabled collogen bundles in the skin (in its late thirties or early forties and later), to hold more water, increase the capiliary bed and number of mitoses taking place in the living layers of skin. As a result, aged skin looked more full and lively resulting in a more youthful appearance.

The other and more recent promotion has been the use of ozonides for the purpose of causing skin to peel as in keratosis. These ozonides according to Sharlit[14] are combinations of ozone with the double bond of unsaturated fats which in turn liberate oxygen readily in presence of moisture. Little further is known about them.

Hair and Scalp Preparations

Undoubtedly the best known attainment in the cosmetic industry in recent years has been the headway made by the cold hair wave; its commonest exponent is the home wave. Home waving without heat had been practiced many years[15] before the introduction of thioglycolate waving solutions. But without doubt Neison Harris can be credited with popularizing the home wave as it is now known. His success parallels the large scale production of thioglycolates in highly purified form. For the thioglycolate reduced to a half hour or so the reaction time on hair formerly requiring four hours and more.

With the stong reducing action on hair, a strong oxidizing agent was required. Potassium and sodium bromates were ideal for the purpose. More recently they are being replaced by sodium perborate monohydrate[16], usually containing an additive.

Stannites and titanates were introduced,[17] as depilatories but neither type of compound has been found sufficiently stable for commercial use.

Thioglycolates not only revolutionized hair waving but actually they were first used in cosmetic depilatories of the so-called ordorless type. The Evans & MacDonoughs patent[18] issued recently covers the use of thioglycolates, among other sulfur derivatives in depilatories. The patent has been upheld in the Federal District Court for Maryland in 1947.

Less spectacular, but just as much an innovation, is the cream shampoo. Its origin is not too clear but to best knowledge, it was first introduced to beauty shops by a Dayton company, who probably being unable to sufficiently solubilize Duponol WA Paste in water, decided to take advantage of its nice solid pearly appearance per se.

However the product turned semiliquid and transparent at temperatures above 65° F. Eventually one, then several companies learned to use hard soap among other things to keep the product stable and opaque at summer temperatures. The same idea has been adapted to liquid cream shampoos.

The aerosol shampoo is the latest bid for the buyers' favor. As you know, the can or bomb delivers the shampoo as a foam. The claim is that it takes less shampoo as such to do the job of cleaning hair.

Another interesting discovery is the use of certain cationic compounds in producing a cream hair rinse to be applied after the shampoo, to give the hair a "hand" or soft feel, with gloss or sheen. While numerous cationic compounds exist and many of them will do the job, Triton X-400 stands out almost alone in this field.

The recent introduction of estrogens in scalp pomades for the purpose of growing hair has as yet not established itself as a useful treatment. While there is some basis in theory, time will tell if the product will work in fact.

The war brought to the front cream oil hair dressing, a liquid, water/oil emulsion that could be made without alcohol. Its perfection changed the hairdressing habits of Americans and brought a new vogue into being in this country, emulsified hairdressings being known for some years in Europe.

Make-Up

Best known make-up is Pancake which practically put face powder out of business during the last decade. Its composition is covered by two patents.[19] Variations of the patented products soon appeared and had their heyday too. Essentially, cake make-up is a powder with high covering power containing binder and wetting agents, pressed into cake form.

About the time cake make-up had seen its day, came the oil suspensions, of which Overglo was best known. It is patented in England[20]. Oil suspensions enjoyed top position in sales for a short while when the emulsified pigmented liquids made their debut. Ease of application and long-lasting properties brought them quick acceptance. One of the first, if not the earliest was Liquid Beauty, still going strong.

Simultaneous with the introduction of the liquid emulsions came the offering of Revlon Fashion Plate, a gelled, plate, oil cake make-up, made by gelling esters

Pads are giving way to aerosol bombs for this task.

such as isopropyl myristate with carnauba or other waxes. They still enjoy considerable popularity.

During this time, Angel Face was developed, and outmoded the previous cake make-up which required a wet application. This new product is essentially a compressed powder with high covering powder that applies in the same way as ordinary compact face powder. Both above products were introduced in the Spring of 1947.

In the field of lipstick, Liptone was the first patented[21] liquid lipstick utilizing cellulose derivatives as film forming agents. Ethyl cellulose in a safe solvent dissolved and plasticized is the carrier for the coloring matter. The resulting product is used as a lip lacquer, drying rapidly to a smearproof application.

Most recent trend in lip make-up is the Hazel Bishop type of lipstick which stains deeply but does not smear. Just what is used in obtaining this effect in the commercial products is not known exactly. It is an established fact that tetrahydrofurfurly alcohol[22] and its fatty acid esters[23] are excellent solvents for acid eosines or bromo acids as they are known; both the alcohol and the esters are patented for this use. In addition it is also known that polyethylene glycols and their derivatives are good bromo acid solvents.

Only in the last five years has rouge seen any major improvement although about ten years ago, a rouge in vanishing cream form was enjoying some popularity, but it had the drawback of changing color and drying out. The latest ideas are stable liquid emulsions. A drop when spread gives the required tinting effect to the cheek.

Mascara has had few innovations in recent time although currently it is being supplied as a superfatted alkanilamine soap containing insoluble pigments. In former times a hard, highly refined soap was used as a base, but unlike the present products it did smart the eyes. Soft emulsified cream mascara has also been developed. It dries to a waterproof film and is usually sold in small collapsible tubes.

World War II introduced two really unusal forms of make-up, one for civilian use the other for military use. The civilian discovered leg make-up[24] during the stocking shortage. The products were ingenious in that they did simulate stockings; when properly formulated and applied they did not smear or streak and they were fairly water repellent in their ultimate forms. Once stockings became available, leg make-up lost a major part of its market.

Military make-up was the camouflage stick used by all branches of the service. It was quite unique in that its colors simulated earth or foliage. The base was a fatty vehicle that in its final form actually applied to sweaty skin as easily as to dry skin. It produced a dull, mat effect unlike the usual oily or glossy appearance given by fatty based make-up sticks. Millions of sticks were used in the war. Military camouflage was truly a product of the ingenuity of the cosmetic industry.

Manicure Preparations

After the introduction of cream or pigmented nail polish about twenty years ago, nothing really significant has been developed in this field. True the development of formaldehyde urea-sulfonamide resins as adhesives and additives has enabled the manufacture of better and longer lasting nail polish. Yet this is not a particularly great achievement any more so than the dozens of shades of nail polish that are offered. One patent[25] included ethyl cellulose and a surface active agent such as sodium alkyl sulfate or diglycol stearate which would be removed from the nails when placed into water thus enabling the nails to breathe, yet keep the polish intact.

Another development does stand out although it is quite dead in its original patented[26] form and that is the application of an oil blend on top of the fresh nail polish to make it seem drier than it was and therefore enable the wearer to go about her work without fear of smudging.

Top coats and base coats, while new products are nothing unusual being modifications of nail polish itself.

Soaps

These comments are confined to bar toilet soap, for to list the advances in the entire soap field is a subject for review by itself.

To me the formulation of the army-navy all-purpose soap bar in the last war was quite an achievement. It blended together the best of both the synthetic detergent properties and of soap. The alkyl aryl sulfate type worked well.

Another refinement was the introduction of Dial deodorant soap which contained hexachlorophene as the antiseptic ingredient, the use patent[27] for which was issued late last year. By inhibiting the growth of bacteria on the skin surfaces such as under the arms, body odor is greatly reduced.

Hexachlorophene or G-11 as it is known in the trade is also used in one shaving cream for its antiseptic properties.

Another major but not ballyhooed advance was the

introduction of Sapanox, a brand of O-tolyl Biguanide, a soap antioxidant, used throughout the world in the manufacture of good soap and products derived from it. The use of B-methyl umbeliferones to give the appearance of whiteness enabled soap makers to substantially reduce the amount of whitening pigments in fine soap. It later proved to be substantial to cloth, giving it a whiter look after washing, thus starting a new field of research.

Sun Screens

Man was on the track of adequate sun screens long before the scientific approach was developed. Tannin-containing substances have been widely used as infusions of various drugs. Even tea and cider vinegar were used before exposure to the sun.

However, chemical sunscreens made their appearance about fifteen years ago. It is not certain that the first patent[28] covered the use of naphthalene sulfonic acids, but if not, these were one of the earliest types of chemical sunscreens. They were closely followed by methyl salicylate[29]. From then on, numerous patents[30] have been issued to cover salicylates, ortho, meta and para aminobenzoates, powdered metals, dyes, azines, phenones, benzimidazoles ethylene and propylene oxide reaction products of tannic acid, pyrons, umbeliferones; hydroquinone and esters of pyrogallol. In each case the screening compound should absorb about 95 per cent of the range 2850 to 3200 Angstrom and allow the longer wavelength to pass through.

Spectrophotometric testing has been elaborated for determining screening efficiency at various wavelengths. Clinical tests using human subjects with quartz mercury arc lamps or the Uviarc type of bulb lamps have been developed. Even so, these tests determine only part of the effectiveness of a sunscreen. The real test is on the beach. Sunscreens found effective by spectrophotometric and so-called clinical tests have failed on the beach and vice-versa. Stamboosky has devised a chart that predicts beach usefulness from laboratory data[31].

The valuable role played by sunscreens is not fully appreciated unless one had seen World War II survivors of bombed ships who had been on the ocean for a week or longer both with and without adequate sunscreen protection. The need for protection from the sun was so great that sunburn cream was standard equipment on all life rafts and lifesaving equipment at the turning point of the war.

A similar role was played by sunscreens in the air force and in ground forces in the tropics.

Other Progress

It is impossible to classify all forward steps by product types. Much progress must remain in other categories. Thus the last fifteen years have seen the introduction of methyl cellulose, carboxymethyl cellulose, hydroxyethyl cellulose, methyl ethyl cellulose, methyl hydroxyethyl cellulose, sodium cellulose sulfate, purified alginates, Irish moss extractives, acrylate gums, guar and polyvinyl alcohol, to mention the most important. These have opened new fields with their special properties not possessed by natural gums in common use. In some cases their properties overlap but in most cases each of the above have highly specialized properties that make them valuable for a specific job, because of stability or for other reasons.

Applications of these new materials would take pages to relate.

Hygroscopic Plasticizers

World War II in particular stimulted interest in this field of products formerly dominated by glycerin. It is true that some of the glycols were already well-known and widely used. Carbitol in particular was enjoying substantial sales in the cosmetic industry.

It is not often that a large chemical company drops a chemical that later becomes a tonnage item with a competitor. Yet that is exactly what happened with sorbitol. Fortunately for all industry during World War II, Arlex brand of sorbitol syrup[32] eased the glycerin shortage and established itself firmly in the field. In the meantime, one brand of propylene glycol[33] was so refined as to be water white and odorless. It was recognized by the National Formulary which adopted a monograph on it. Its safety for internal and external use was established at the same time. It is good that Arlex and propylene glycol became so well-accepted for both have held their prices well, while glycerin succumbs to inflationary prices at the first sign of scarcity.

Hygroscopic plasticizers are used in cosmetics to retard drying in the container as in hand or vanishing cream, to enable easy spread on the skin without rolling, balling or separation of phases and to have an emollient effect on the skin, without sweating or stickiness.

Other commercial hygroscopic plasticizers developed are the carbowaxes, ethylene and propylene oxide derivatives of sorbitol, mannitol and other sugars. Amylosides, methyl[34] and ethyl glycerin, polypropylene glycols and their ethers are developed, but not all these are available in commercial quantities.

Anti-Oxidants and Preservatives

Not much happened among antioxidants for cosmetic use until a few years ago when N.D.G.A.[35] was introduced as an antioxidant for animal and vegetable fats. It has proven itself very useful. This was followed by the gallates[36], tocopherols[37] which are not allowed in U.S.P. mineral oil, and by butylated hydroxyanisole[38]. All are useful in animal, vegetable and mineral oils.

About the same time dehydracetic acid[39] was introduced as a preservative against mold, bacteria and wild yeast. The material is being used in drug and cosmetics very satisfactorily, but it has not yet cleared for food use. It has the advantage over the 25-year-old p-hydroxybenzoates in that it is odorless and more effective in use, it is claimed. A series of esters of vanillic acid have been tested and reported[40] to be good preservatives. Ethyl vanillate is reputed to have the best all around preservative action.

Miscellaneous Materials and Products

During the period of this review a number of unusual solvents made their appearance. No attempt is made to describe the following materials in chronological order. Among them are hexylene and octylene glycols, butane diols, tetrahydro furfuryl alcohol and its derivatives, a host of so-called synthetic oils which

Research has uncovered new, effective and simpler ways of protection from the burning rays of the sun on beaches and in the services.

are fatty acid esters of various polyols or their ethylene oxide condensates, the oxo liquid alcohols to name only some of the most prominent.

Oleyl, cetyl and stearyl alcohols though developed earlier, really did not reach their usefulness until the last few years. Most any combination of one or the other alcohol can be had at will. Carbonates, acetates and other fatty acid derivatives of these alcohols have also been offered for their special properties.

During this time a magnesium aluminum silicate of high purity made its debut under its trade name of Veegum[41]. The material has all of the desirable properties of bentonite and none of the undesirable characteristics.

More recently the Bentones[42] or cationic bentonites have made their appearance. They are oil soluble and do in oil very much what bentonite does in water.

The host of emulsifiers based principally on glycerine, ethylene and propylene glycol, sorbitol and mannitol have been so refined that one can order them under any specification desired. These materials are finding their way into every conceivable emulsified product, in their different ionic forms.

To attempt to cover all of the surfacants developed during this era, by name only, would take a paper longer than this. Suffice it to say that the principal types were developed prior to 1938 with the possible exception of the non-ionics which have only recently come to the fore. Probably the most outstanding development in the non-ionic field is the production of a flake form of surfactant known by the trade name of Pluronic[43].

The cationic compounds have revolutionized the sanitation and antiseptic fields and generally speaking both are outside of the scope of this paper, with the exception of a limited few.

Cholesteryl ethers have been offered as superior water and oil emulsifiers although they are not commercially available in this country, having been developed in Australia[44].

A series of products derived from isopropyl and butyl alcohols and esterified with myristic, palmitic and stearic acids, alone or in combinations have made possible numerous cosmetic variations of specialities for they are substantially thin oil-like liquids. Butyl stearate[45] and a principal brand of isopropyl palmitate known as Deltyl[46] are best known. Most recently isopropyl palmitate earned a patent[47] for its claim to keep lanolin in large quantities, in solution with mineral oil.

While not new, so-called frozen or stick colognes made a major bid for sales during the last few years. They are alcogels, using sodium stearate as the gelling agent in which the fragrance is dissolved[48].

Synthetic racemic menthol, now official in the U.S.P. and so-called Homo-meta-menthol[49] chemically known as trimethylcyclohexanol, both relieved the shortage of menthol during World War II.

Lithium stearate is an insoluble metal stearate more readily wettable than other stearates, with better bulking properties.

Titanium dioxide and zirconium oxide are products of commercial development of the period under review. In fact titanium dioxide revolutionized cosmetic make-up formulation being an inert covering agent capable of being worked into many different formulations that would not tolerate zinc oxide. Used as a stretcher or replacement for zinc oxide in World War

II, it is now as difficult to get as zinc oxide, if not more so.

The number of qualified chemists in the industry has increased to the point where the Scientific Section of the Toilet Goods Association (the trade association of the industry) and the recently founded Society of Cosmetic Chemists regularly present many scientific cosmetic studies before several hundred chemists of the industry; fifteen years ago this would be an unbelievable possibility. This is one of the singular developments in the industry during the period under review.

Shaving cream progress is pretty static. The only significant patent in this field is granted to Fash[50] incorporating chromium derivatives in the brushless shave cream to prevent corrosion of the thin steel razor edge. Liquid shaving creams have been offered but are little more than dilute versions of the soap shave cream. Hollander and Casselman published a study of factors involved in satisfactory shaving.[51].

Electric shaving is on the increase and with it are required lotions or powders to use in warm weather to dry the skin. Also needed are lotions to prevent corrosion and to sterilize the razor head.

Reverting to materials again we can't help wonder what role silicones are going to play in the cosmetic industry. Their interesting properties are already under test in the more alert laboatories.

Conclusion

The last fifteen to twenty years have seen great strides in the industry. The formation of a Scientific Section in the Toilet Goods Association and the beginning of the Society of Cosmetic Chemists portend further steps forward.

The cosmetic industry draws on many industries for raw materials from which numerous unusual products have been patented.

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Dyeing Comes Alive

A BEAUTY shop supply salesman tells me he has sold more dye solvent in the last three months than he did in the five previous years. Threatened shortages and other factors may have had a part in this increase, but what it mostly goes to show is that the recent emphasis on home "tinting" has brought business to the beauty salons. Dyeing hair is in the air; now a woman will admit what she's doing or thinking of doing whereas before she whispered suspicions about others. Dyeing hair has become a subject fit for "mixed company."

In some ways it repeats the history of home permanents. When they first came in, beauty shop operators got panicky and sat up nights planning what other work they would go into. Soon they found that all the talk and advertising made women more permanent-conscious and their trade was not worse, but better. They also got some "repair" work from women who were unhappy about their home jobs. I'm told that this is already beginning to happen in the home-tint field. At any rate beauty shop operators seem to have long enough memories to realize that in the long run, this is an asset to their business.—*Charlotte Montgomery in Tide.*

Proper Packages for Groceries

RECOMMENDATIONS made by grocers to manufacturers of cosmetics and flavoring extracts came with two questions raised at the Super Market Institute panel:

Why do some of the manufactured articles not have adequate space for pricing on top of the product? Why do not all manufacturers use the same kind of packaging cases so that same are opened from the top?

Putting questions such as these direct to manufacturers who want to give complete service has brought about a closer cooperation between them and their distributors.

Water-in-Oil Emulsions

*Studies in water-in-oil emulsions. I. The influence of disperse phase concentration on emulsion viscosity. II. The effect of pH on the reciprocal mobility.**

P. SHERMAN

I. Influence of Disperse Phase Concentration on Emulsion Viscosity

The effect on the reciprocal mobility of water-in-oil emulsions of varying the ratio of the two phases has been investigated using a variable-pressure capillary plastometer. When a water content up to about 50% of the total volume and 2 to 5% emulsifier (or approximately 60%, with 1% emulsifier) were used, there was no marked rise in the reciprocal mobility, and the emulsions behaved as Newtonian liquids. Further increases beyond these limits, however, effected pronounced changes, the emulsions exhibiting plasticity and developing 'yield values,' and the reciprocal mobility rose rapidly to a maximum. Above certain critical concentrations of disperse phase, inversion to unstable oil-in-water emulsions occurred, accompanied by a great loss of viscosity. Both the value of the maximum reciprocal mobility developed and the point of inversion depended on the concentration of emulsifier employed.

The modified Einstein, Richardson and Hatschek equations were applied to the viscosity data. Provided that the emulsions exhibited Newtonian behaviour, they conformed to the modified Einstein and Richardson equations, whereas with the onset of plasticity the modified Hatschek's equation was obeyed.

PREVIOUSLY published work on this subject has been devoted to emulsions of low viscosity, where the measurements have been derived by the use of an Ostwald or Couette type of viscometer. Bingham[1] discusses the sources of error and problems of viscosity determinations with such instruments. In the present work, by using plastometric technique, thereby enabling the viscosity to be examined over much wider ranges of shear and stress, it has been found possible to study emulsions of much higher viscosities than hitherto.

Experimental

The emulsions were prepared from mineral oil and distilled water, the emulsifying agent being a non-ionic hexitan ester of oleic acid, sorbitan sesqui-oleate. The emulsifier was dissolved in the oil phase, and the water was added gradually with constant stirring. After the whole of the water had been added the emulsions were passed twice through an homogenizer. In this way the particle size was reduced to 1 μ. or less. The viscosity of the systems was also increased by this treatment owing to the greater surface area exposure of the disperse phase and, as a consequence, greater adsorption of the emulsifier at the interface.

The emulsion mobilities were determined with a variable-pressure capillary plastometer of the type described by de Waele,[2] the shear behaviour with varying stress being measured. Fig. 1 is a typical example of the results obtained with emulsions containing up to 50% (by weight) of the disperse phase. (Up to this concentration, the emulsion viscosity appeared to be independent of the percentage of the emulsifier employed.) The graph illustrates that, at the stipulated water concentration, the viscosity is a function of the rate of shear, and that over a wide range of disperse phase there is a linear relationship between shearing stress and rate of shear; at 40% and 50% water, however, there is a slight indication of divergence at low pressure.

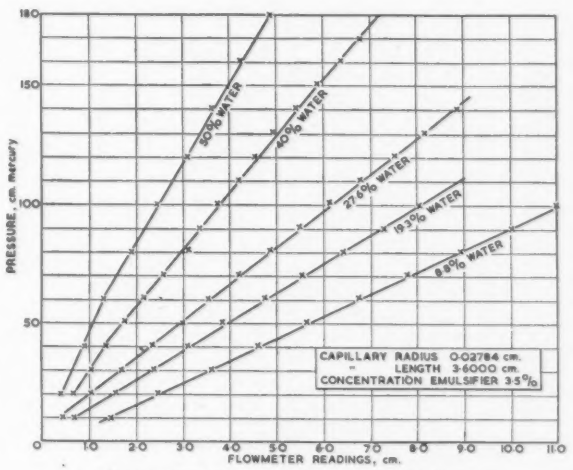

Fig. 1. Viscosity as a function of rate of shear.

For these mobilities a narrow capillary was used, enabling measurements to be made at very low pressures. However, above 50% water concentration (60% where 1% emulsifier was used), owing to the larger viscosities of the emulsions and their plasticity it was necessary to substitute a capillary of larger diameter. At the higher viscosities (Fig. 2) it was found that the viscosity decreased with increasing rate of shear, as indicated by the bending of the curve towards the horizontal axis. Eventually, however, the graph became linear, as in the lower concentrations, and it was from the linear portions that the mobilities were calculated in these systems. The reciprocal mobilities were always adopted as the nearest approximation to the emulsion viscosity.

The results are shown in Table I (columns 1, 2, 4 and 7), and are presented graphically in Fig. 3.

It will be observed that comparatively little rise in viscosity occurs up to a water concentration of 50% (60% where 1% of emulsifying agent was used). Further increases in the disperse phase present led to sudden, and far more emphasized, increases of viscosity, until at a concentration of between 75% and 80% disperse phase

*Published by courtesy of the Journal of the Society of the Chemical Industry.

(62·5% where 1% of emulsifier was used), depending on the concentration of emulsifier, a maximum of viscosity was developed. Slight additions beyond these points were sufficient to cause inversion of the emulsion to the O/W type, and complete loss of viscosity. This sequence of events was typical of all emulsions examined, but the concentration of disperse phase above which inversion occurred, and the maximum viscosity developed, were

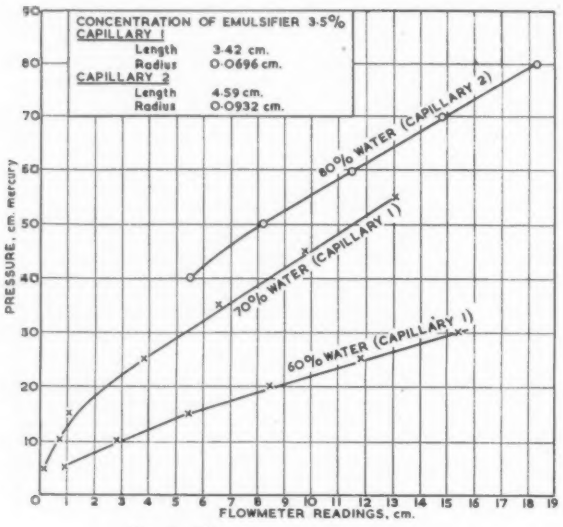

Fig. 2. Viscosity and rate of shear.

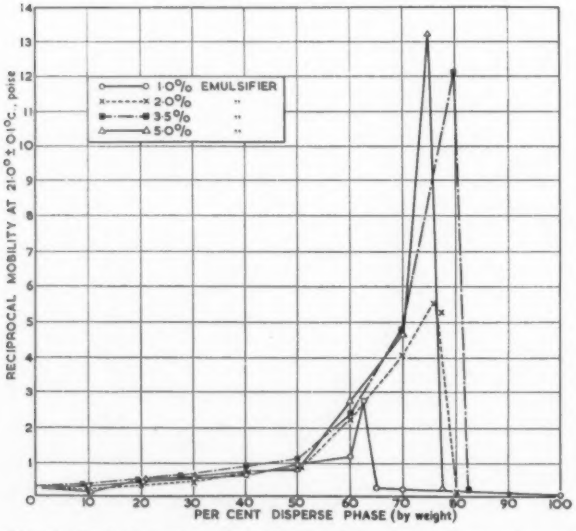

Fig. 3. Variation of reciprocal mobility with concentration of disperse phase.

both dependent on the percentage emulsifier employed. Thus it was only at the higher viscosities that the quantity of emulsifier exerted any influence.

Discussion of results

Joshi,[3] working with low-viscosity emulsions, observed an increase in the viscosity of W/O emulsions as the concentration of the disperse phase was increased to a maximum value; this was followed by inversion. He stated that in the neighbourhood of the inversion the viscosity never rose uniformly. Dixon and Bennet-Clark,[4] studying the electrical resistance of emulsions of varying W/O ratio, claimed that their results indicated that the inversion of the phase took place gradually and not suddenly. They admitted, however, that inversion might be more sudden if the emulsion could have been prepared more uniformly.

Kremann, Griengl, and Schreiner,[5] working with olive oil, water and aqueous solutions of sodium hydroxide and hydrochloric acid, measured the change of viscosity with the percentage olive oil content. Up to 23%, the emulsion viscosity (O/W) was little greater than that for pure water, but there was a sudden rise to a maximum at 25% oil. Further increases in the oil concentration led to a fall in viscosity, and inversion to unstable W/O emulsions. Thus, in effect, they obtained the same type of result as reported here by starting from the opposite end.

It is interesting to note that the maximum viscosities were developed at 75 to 80% by weight, i.e. approximately 77 to 82% by volume of the dispersate, with the single exception of that containing 1% emulsifier, which apparently does not accord sufficient stability to the system to enable the water content to be increased beyond 62·5% by weight, i.e. approximately 65% by volume. According to Schulman and Cockbain,[6] the disperse phase particles of W/O emulsions are surrounded by rigid interfacial films, the particles being irregular in shape. It is probably due to this latter phenomenon, that the close packing exceeds the theoretical 74·04%.

At higher water concentrations, and just before inversion, it appears that the percentage of emulsifier is of primary importance in determining viscosity. This may be ascribed to the greater rigidity of the film, the greater the emulsifier concentration. But at 5% emulsifier inversion occurs at a lower value of the disperse phase than for 2% or 3·5% emulsifier. Apparently, with 5% of emulsifier, the thickness of the interfacial film increases the overall dimensions of the dispersate particles to such an extent that the conditions of close packing are attained at a lower volume-ratio. Moreover the resistance offered by the interfacial layer is insufficient to prevent coalescence.

With reference to the stability of these emulsions, Pink[7] showed that in the use of oil-soluble soaps in the preparation of water-in-oil emulsions, all the soap was precipitated from solution in the presence of very small quantities of water; so that, provided the concentration of the soap was constant, the amount of precipitated soap available for the formation of the stabilizing film was independent of the phase ratios. Similarly, in this work, provided that the optimum concentration of emulsifying agent was present, the phase ratio giving maximum stability of the emulsion towards centrifuging was independent of further addition of emulsifier. In general, the higher the viscosity at this phase ratio, the more stable was the emulsion.

Application of viscosity equations to the emulsion reciprocal-mobility data

(1) *Guth-Simha*[8] *modification of the Einstein equation.*—The values of η_o were determined by the use of an Ostwald-type viscometer, and the values of ϕ from the density. The results are included in Table I.

TABLE I

(1) % emulsifying agent	(2) Disperse phase, % (w/w)	(3) ϕ	(4) Reciprocal mobility of emulsion at 21·0 ± 0·1° C., η (poises)	(5) η_0 at 21·0 ± 0·1° C., (poises)	(6) $\frac{\eta_{sp}}{\phi}$	(7) Type of emulsion
	10·0	0·0884	0·304	0·218	4·445	W/O
	20·0	0·1792	0·375	0·219	3·967	"
	30·0	0·2727	0·500	0·220	4·653	"
	40·0	0·3687	0·656	0·223	5·282	"
1·0	50·0	0·4669	0·937	0·225	6·784	"
	60·0	0·5676	1·171	0·226	7·356	"
	62·5	0·5941	2·695	0·228	18·190	"
	65·0		0·247			O/W
	70·0		0·188			"
	10·0	0·0900	0·341	0·270	2·900	W/O
	20·0	0·1819	0·420	0·274	2·930	"
	30·0	0·2762	0·523	0·278	3·183	"
	40·0	0·3729	0·703	0·283	3·984	"
2·0	50·0	0·4713	0·789	0·287	3·708	"
	60·0	0·5726	2·256	0·291	11·790	"
	70·0		4·097			"
	76·0		5·526			"
	80·0		0·079			O/W
	8·8	0·0849	0·353	0·285	2·815	W/O
	19·3	0·1744	0·456	0·290	3·286	"
	27·5	0·2509	0·592	0·296	3·994	"
	40·0	0·3707	0·844	0·301	4·874	"
3·5	50·0	0·4690	1·070	0·307	5·309	"
	60·0	0·5704	2·359	0·311	11·550	"
	70·0	0·6739	4·753	0·317	20·770	"
	80·0	0·7799	12·050	0·323	46·610	"
	82·5		0·260			O/W
	10·0	0·0904	0·375	0·299	2·798	W/O
	20·0	0·1828	0·463	0·308	2·757	"
	30·0	0·2773	0·551	0·315	2·705	"
	40·0	0·3739	0·624	0·323	2·493	"
5·0	50·0	0·4726	0·789	0·331	2·934	"
	60·0	0·5736	2·780	0·339	12·535	"
	70·0		4·670			"
	75·0		13·150			"
	77·5		0·225			O/W
	80·0		0·151			"

The graph, Fig. 4, was obtained by plotting η_{sp}/ϕ against ϕ for the various concentrations of emulsifying agent used. From the slopes of the curves, and their extrapolation to zero concentration, the Guth-Simha and Einstein factors respectively were obtained, and their values are set out in Table II.

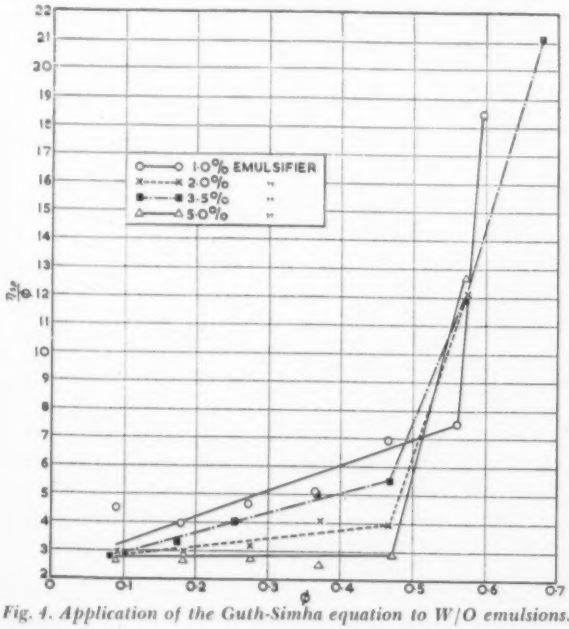

Fig. 4. Application of the Guth-Simha equation to W/O emulsions.

TABLE II

Concentration of emulsifier, %	$\frac{\eta_{sp}}{\phi}$ $\phi \to 0$	$\frac{\eta_{sp} - 2{\cdot}5\,\phi}{\phi^2}$
1·0	2·27	9·71
2·0	2·60	2·27
3·5	2·27	6·66
5·0	2·75	0·00

The values of the Guth-Simha factor suggest that the mutual interference between the dispersed water globules, though varying with different concentrations of emulsifying agent, is much less than suggested by Guth and Simha.[8] It is worth noting in this connexion that Eilers,[9] working with paraffin oil and bitumen suspensions, suggested a formula for particles of uniform size, which had the form:

$$\eta_{sp} = 2{\cdot}5\,\phi + 4{\cdot}94\,\phi^2 + 8{\cdot}78\,\phi,^3$$

whereas Eirich, Bunzl and Margaretha[10] found that their results conformed to the expression

$$\eta_{sp} = 2{\cdot}5\,\phi + 8{\cdot}0\,\phi^2 + 40{\cdot}0\,\phi.^3$$

Ewart[11] also expresses the view that the experimental values for suspensions of known size do not indicate such a large value as 14.1 for the second constant.

In the experiments described above it would appear that the mechanical reaction of the water globules and the oil phase around them, in general, decreases with increasing concentration of the emulsifying agent over the range of concentration of disperse phase in which Newtonian flow prevails. Therefore it is possible that no one formula of universal application could be derived.

Deviations from the theoretical Einstein factor have long been recognized for suspensoids,[12] and are usually attributed to such causes as flocculation, hydration of particles, etc. Such explanations do not appear valid in these systems, but it must be observed that the departure from the theoretical value is only slight. Schulman and Cockbain[6] state that, for the formation of W/O emulsions, there must be a solid condensed film at the interface, and that this film should be rigid and uncharged, since charged molecules give liquid or gaseous films. Furthermore, no coalescence of the water globules will occur, as the oil cannot be squeezed out from between them. Preliminary observations on the viscosity of films of sorbitan sesqui-oleate,[13] produced at the interface between water and mineral oil,[14] tend to confirm this view. Thus each water particle may be regarded as being in effect solid while Newtonian flow persists; i.e. until conditions approach those of 'cubical' packing of the disperse phase, little disturbance occurs of the continuous phase around the water particle. Beyond this concentration, however, there is a switch over from 'cubical' to 'close' packing and an increase in the number of contacts of each water globule. Consequently the disturbance to flow increases, as indicated by major deviations of the Einstein and Guth-Simha (or modified) constants from their theoretical values.

(2) *Richardson's equation.*—Richardson[15] developed an equation, from physical principles, for the relationship between the viscosity of the emulsion and its continuous phase:

$$\eta = \eta_0 \, e^{k\phi}$$
$$\text{or } \log_e \eta/\eta_0 = k\phi$$

Fig. 5 was obtained by plotting $\log_e \eta/\eta_0$ and ϕ as ordinate and abscissa respectively. The straight-line

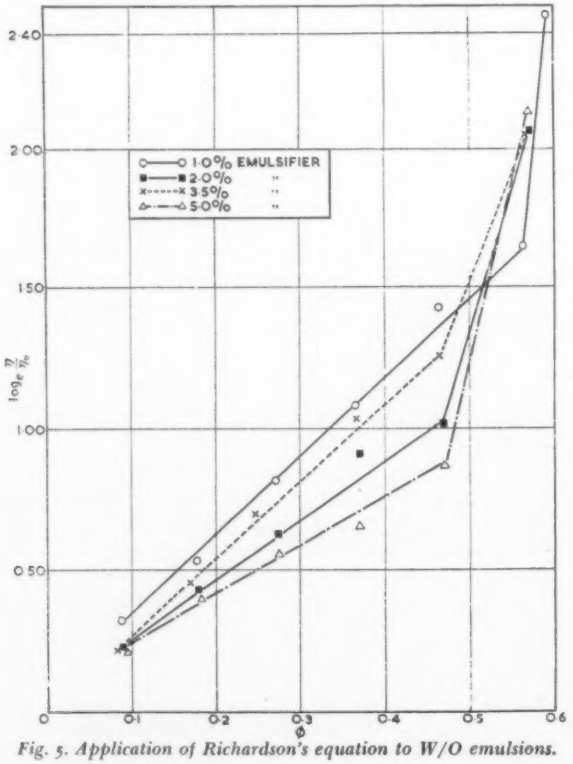

Fig. 5. Application of Richardson's equation to W/O emulsions.

relationship holds only up to a value of ϕ of approximately 0·5 if 2 to 5% of emulsifier were used, and of approximately 0·6 if 1% were used. Furthermore, the graph does not pass through the origin, as would be the case if the above equation were obeyed. The values derived from the slope of the curves (k) and the intercept obtained on extrapolation back to the ordinate axis (a) are given in Table III.

TABLE III

Emulsifier concentration, %	k	a
1·0	2·75	0·08
2·0	2·06	0·05
3·5	2·72	0·00
5·0	1·67	0·08

Only emulsions incorporating 3·5% sorbitan sesquioleate give curves passing through the origin. In all others, the results conform to the modified equation:

$$\log_e \eta_i/\eta_0 = k\,\phi + a$$

as suggested by Broughton and Squires,[16] and confirmed by Simpson[17] working with nitrocellulose-lacquer emulsions. There was no constancy, however, in the values of k and a obtained for the different concentrations of emulsifier employed.

(3) *Hatschek's equation.*—For emulsions containing not less than 50% disperse phase, Hatschek,[18] using a viscometer of the Couette type, showed that the viscosity became constant above a certain velocity gradient. In this region the viscosity was represented by the equation:

$$\eta = \eta_0 \frac{1}{1 - \sqrt[3]{\phi}}$$

Similar conditions held for the linear portions of the plastometer graphs, obtained as described above, from which the reciprocal mobilities were calculated.

The comparable calculated and measured viscosities are indicated in Table IV, the reciprocal mobility once again being adopted as the nearest approximation to emulsion viscosity.

TABLE IV

Emulsifying agent, %	η measured, poises	η calculated, poises	ϕ measured	ϕ calculated	h
1·0	1·171	1·315	0·5676	0·5253	0·93
	2·695	1·435	0·5941	0·7665	1·29
2·0	2·256	1·712	0·5726	0·6607	1·15
3·5	2·359	1·818	0·5704	0·6539	1·15
	4·753	2·577	0·6739	0·8128	1·21
	12·050	4·053	0·7799	0·9230	1·18
5·0	2·780	2·008	0·5736	0·6773	1·18

With one exception the calculated viscosities are all lower than the observed viscosities. This is in accord with the observations of Sibree,[19] who suggested that it is necessary to apply a correction—the volume factor, h—which is partially attributable to the adsorption layer at the interface increasing the effective dimensions of the dispersed globules.

The value of 'h' found by Sibree was approximately 1·3, but he pointed out that this value was obtained with emulsions in which the external phase was confined to aqueous solutions of sodium oleate, and that the value may vary with the emulsifier and the concentration used. For the emulsions examined in the present work, 'h' appears to have a slightly lower value (1·2), and to remain unaffected by emulsion concentration variations.

It is interesting to note that the only instance in which '*h*' deviates appreciably from a value of 1·2 is that of the emulsion incorporating 56·76% disperse phase and 1% emulsifier. Although all the other samples exhibited plasticity, this particular one was still Newtonian in its behaviour.

Acknowledgment

Acknowledgement is due to Dr. C. G. Smith for continued advice and encouragement throughout the course of this work, and to Gestetner Ltd. for providing the facilities for the use of the plastometer in their laboratories.

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II. The Effect of pH on the Reciprocal Mobility

Water-in-oil emulsions, prepared over a wide range of hydrogenion concentration and incorporating non-ionic emulsifying agents, have been investigated. Reciprocal mobility and stability remained unaffected until a certain critical p_H was reached. Above this value inversion occurred with complete loss of viscosity. With rising p_H beyond p_H of 7.0 the emulsifying agents became increasingly soluble in the aqueous phase until at the critical limit solubility was virtually complete.

Experimental

Three different emulsifiers of the non-ionic type, namely, mannide mono-oleate, mannitan mono-oleate and sorbitan sesqui-oleate, were employed with an aqueous phase, which was, in all the experiments, a solution of B.D.H. 'Universal Buffer' adjusted to the desired p_H with O·2N-sodium hydroxide; mineral oil constituted the oil phase. The phase ratios and the particular emulsifier concentration were kept constant in each series of experiments but the p_H was varied.

The emulsions were prepared by gradual addition of the aqueous phase to the mineral oil (in which the emulsifier was already dissolved), with constant stirring at room temperature. Finally the emulsions were homogenized. The emulsion type was determined by means of conductivity measurements, and the reciprocal mobility of the emulsions by a variable-pressure plastometer.[1] It was noticed that at alkaline p_H very great care was necessary in preparing the emulsions, the aqueous phase having to be added in very small portions and accompanied by vigorous stirring. Too great an addition at any one time resulted in premature inversion.

Results and discussion

The reciprocal-mobility figures indicated that over a wide range of hydrogen ion concentration the emulsion viscosities remained unchanged in all three series of experiments. Above a certain limiting p_H, which varies slightly according to the particular emulsifier involved, there is, however, a complete loss of viscosity accompanied by inversion to the O/W type of emulsion, as indicated by the great increase of conductivity (Table I and Fig. 1). Addition of a few drops of a saturated solution of barium chloride caused reversion to the water-in-oil type and a sharp rise of viscosity once more.

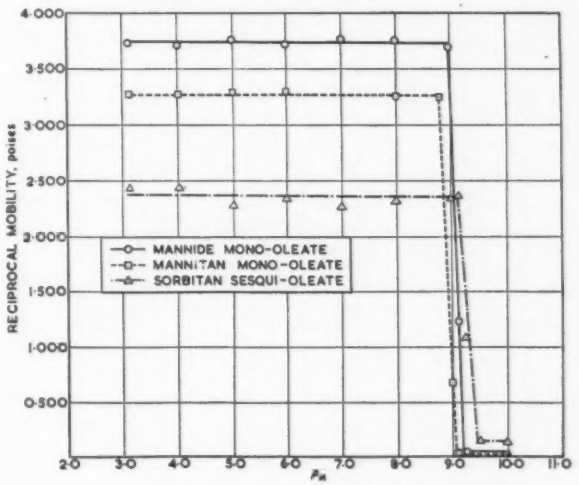

Fig. 1. Effect of pH on viscosity.

Qualitative observations showed that, whereas the emulsifying agents were insoluble in buffer solutions of p_H 7·0, accumulating on the surface as partially solid precipitates, the solubility increased with rise of p_H producing turbid, foamy solutions. At p_H values corresponding to those producing inversion in the case of the emulsions, the solubilities were almost complete. Addition of a few drops of a saturated solution of barium chloride to these soap-like liquids caused the re-precipitation of the emulsifiers.

These observations suggest that, at alkaline p_H, there is progressively increasing interaction between the emulsifier (fatty-acid ester) and the free alkali present, resulting in the production of emulsions of the oil-in-water type; this effect is in direct opposition to that of the unchanged ester, which stabilizes the water-in-oil type. As soon as the product of the interaction predominates, as would appear to occur in the region of p_H 9, inversion occurs. Because of the presence of these two opposing systems the inversion point is not necessarily too sharply defined, and it is possible to obtain an emulsion which is made up of both types.

Addition of barium chloride causes production of a bivalent soap, and thus reversion to the W/O type of emulsion. This is also in accord with the view of Bancroft,[2] that the phase in which the emulsifier is most soluble tends to become the continuous phase of the emulsion. Thus when the emulsifier becomes completely soluble in the aqueous phase, presumably owing to hy-

drolysis (or saponification), it can no longer stabilize the W/O emulsion but instead gives rise to the O/W type.

Stability observations were carried out over a period of eight weeks, the emulsion samples being allowed to stand in graduated stoppered cylinders at a temperature of 45° C. No visible water separation occurred during this period, although 'creaming' was observed, the degree of oil separation decreasing with increasing p_H. The samples were finally centrifuged for 5 min. at 6000 r.p.m. Slight water separation was now to be seen, but to approximately the same extent in all cases.

TABLE 1

Emulsifier and phase composition%		p_H	Reciprocal mobility of emulsion at 21° C. ± 0·1° C.	Type of emulsion
(*a*) Emulsifier :		3·1	3·745	W/O
Mannide mono-oleate		4·0	3·735	»
		5·0	3·811	»
		6·0	3·724	»
Phase composition :		7·0	3·775	»
Aqueous phase	65	8·0	3·811	»
Oil phase :		9·0	3·704	»
Emulsifier	2·5	9·13	1·225	O/W
Mineral oil	32·5	9·25	mobile liquid	»
(*b*) Emulsifier :		3·1	3·270	W/O
Mannitan mono-oleate		4·0	3·277	»
		5·0	3·294	»
		6·0	3·311	»
Phase composition :		8·0	3·253	»
Aqueous phase	65	8·8	3·253	»
Oil phase :		9·0	0·683	O/W
Emulsifier	2·5	9·1	mobile liquid	»
Mineral oil	32·5			
(*c*) Emulsifier :		3·1	2·420	W/O
Sorbitan sesqui-oleate		4·0	2·437	»
		5·0	2·281	»
		6·0	2·331	»
Phase composition :		7·0	2·255	»
Aqueous phase	60	8·0	2·306	»
Oil phase :		9·0	2·335	»
Emulsifier	2·5	9·15	2·371	»
Mineral oil	37·5	9·25	1·071	W/O & O/W
		9·5	0·255	O/W
		10·0	0·135	»

Acknowledgment

Acknowledgment is due to Dr. C. G. Smith for continued advice and encouragement throughout the course of this work, and to Gestetner Ltd. for providing the facilities for the use of the plastometer in their laboratories.

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Fair Trade Pricing

THE Office of Price Stabilization has announced procedures for handling applications for fair trade pricing in the light of the recent Supreme Court Decision in the case of Schwegmann Bros. v. Calvert Distillers Corporation and Seagram Distillers Corporation.

In this decision, handed down last May, a majority of the court ruled that a retailer who had not himself signed a minimum price contract could not be enjoined from selling below the minimum fair trade price under the Louisiana Fair Trade Act.

Under Supplementary Regulation 19 to the General Ceiling Price Regulation, any wholesaler or retailer applying to the Director of Price Stabilization for permission to adjust his ceilings on fair trade items must show:

1) Either that his ceiling under the GCPR is less than the minimum price at which he was lawfully required to sell a commodity during the base period of December 19, 1950 to January 25, 1951 under the provisions of a state fair trade act; or that he has been permanently enjoined by a court from selling the commodity below a minimum fair trade price; and

2) That the commodity was generally sold at retail or wholesale during the base period at prices no lower than such minimum price within his locality.

Under the terms of the Supreme Court decision, OPS officials say an applicant would now have to show:

1) That he himself actually signed a fair trade minimum price contract; or

2) That the basic fair trade agreement was entered into in intrastate rather than interstate commerce and that the state fair trade act involved required nonsigners as well as signers who had notice to comply.

OPS officials said that, pending a decision on whether to amend or revoke SR 19 to GCPR, applications are to be processed on the basis of the Schwegmann case, if they contain sufficient information for the agency to decide whether the wholesaler or retailer was actually required to sell at fair trade prices.

If the applicant does not submit sufficient information, the agency will request additional data and remind the wholesaler or retailer that Supplementary Regulation 29 to the General Ceiling Price Regulation may afford him relief. Pending issuance of a general wholesaler regulation, SR 29 was issued May 28 to meet two urgent needs by providing 1) for a follow-through on the upward and downward changes in prices that may result from various manufacturers' regulations; and 2) for taking wholesalers and retailers out of a squeeze in which they may have been caught by GCPR.

"How long have you been using this stuff of my competitors?"

WHAT THE

RETAIL BUYERS REPORT

Summer Sales Indicate Fall Bargain Trends; Demand for Bath, Nail, Teen-Age Sets Seen

JEAN MOWAT

Chicago—Fall cosmetic buying will be predicated upon the run of prices which have received consumer favor the past two months. This means, according to a survey of buyers in 10 cities, that items under $5 will be active, and that the $1 special will produce the volume of sales.

The only reason that department stores and specialty shops have continued to hold their own during the summer has been the number of promotional or two-for-one items that were featured by all leaders in the Middle West. Today, as the season is beginning to change and the velvet hats have superseded the January straws, new bargains are wanted.

The Bargain Market

"If we are going to have a good holiday sale," said a buyer in Detroit who has had an excellent summer selling, "we need more and more promotional items that will sell, on sight, under $5. The $1 lines in particular should be built up and should offer the customer more than she has had in years."

Other buyers echoed this idea and even went so far as to say that only this type and price of goods will sell during the holidays. "We don't know what's ahead but with the continual tightening of the purse strings of Mrs. Consumer we do not expect her to go on a buying binge in the cosmetic department," said a Kansas City buyer. "She wants a bargain, and makes no bones about it. When she finds name-brand goods reduced she asks why. If it is a re-packing job she will buy. But just a price bargain is not sufficient to make a sale. The consumer is brand conscious and demands much for her $1 today."

Items in Demand

Here are some of the items which buyers want to see in the $5 and under package: A complete bath-set to include soap, bubble, talc, and if possible a matching cologne fragrance.

The latter may be a small or sample size but it will aid the sale, according to buyers.

A complete nail-treatment outfit, with necessary tools to keep the kit intact as well as the polish and remover. A complete treatment line—small jars are acceptable—for different skin types, where and as necessary. A complete college or high-school girl kit, well packaged, for use at home or school. And to make the idea complete there are buyers who would like to see perfume samplers combined with cologne as a unit seller. And for the perfume bottle, the dropper or glass-stick so that all the bottle will not be used at one time.

The Economic Trend

It has always been a habit of the average woman to discard her jars, bottles and cartons as soon as these cosmetics have been used. The economical trend is appearing in a new guise, for women want these to be of further use in their own homes. One outstanding seller today is a powder which has a beautiful top and a fairly substantial box and it has sold by the dozen . . . because of the eye appeal of the package. It is one of the few that would tempt a woman and would want her to keep it on her vanity table.

Any maker who wants to have his product long remembered might well change his form of packing to enable any one of his items to serve more than the initial filling. There are no tiny cologne bottles for the hand-bag. There are few combination lip-stick and cheek rouge packed as a unit for hand-bag use, with room for cleansing cream. It is this type of item for which Mrs. America will pay. She can use it in her hand-bag, keep it in the car, in the office desk and in her locker. The first one on the market was a $1 item and it could probably be packaged again for that price—but the container must stand up under long usage. Plastics would be entirely satisfactory in that respect.

Hair dyes, shampoos, stick colognes and perfumes, permanent wave sets, deodorants, sun lotions and creams highlight summer selling across the nation.

•

Consumers' thrift trend forebodes increased demand for lines priced under $5, with emphasis on $1 items.

•

Containers with multiple-use or refillable features may make the difference in competitive brand selection.

Active Sellers

A trek across the major cities of the Middle West reveals what's selling. All bath preparations from soap to bubbles are slow. Treatment lines are reported to be even slower. Perfumes are slow in popular priced stores; apparently storename is also considered in purchase and conventioners are the heavy buyers. All types of permanents are active, and hair aids such as salves and ointments are moving well. Shampoos of all types, with cream slightly in the lead, are active and rinses are growing in popularity.

With cosmetic sales slackish, now is the time to cut overhead without limiting sales—simply by reducing the variety of colors in lipstick and nail polish, and of fragrances in cologne sticks. Now, too, is the time for dealer aids featuring newspaper write-ups which many customers have missed, and use of cards to indicate a brand new item in the department as "It's New"!

Now, too, is the time for holding small free classes in make-up. It is the one good will undertaking which pays off fast. At the conclusion of the class the instructor should indicate what is best in cosmetics for *each* member of the class. It is the most subtle form of selling ever invented.

Across the Middle West major stores and all the speciality shops there is a request for an ensemble package—*not gift wrapped*. In an inexpensive cardboard box and one which can be sold at any time of year, buyers want these items: soap, bath salts, bath or talc powder and cologne, preferably all in the same fragrance. For the luxury package perfume may be added.

Conventions in Chicago, Detroit and the Twin Cities, in Kansas City, Des Moines and St. Louis are responsible for substantial perfume sales. The majority of the sales have been made to the men, who had special orders for specific fragrances. Summer sales of perfume are rated as excellent business for these are normally not too active. Where samplers are shown these continue to sell. The only exception is in the popular priced store and those with high-priced basement departments. Perfumes in these two groups are slow and rated as only a "holiday" item. In talking with buyers the fact that it is only made a point of sale at Christmas is evident, for most of them do not display much in the way of perfume.

Cologne sales go up

This is the third season for the stick cologne and if the present rate of sale continues it will be the banner year. No item of any style importance ever carries over in large volume beyond the third year . . . as evidence consider sun-tan lotions and summer-tan applications in foundations that have flopped.

The only reason the cologne sticks sell is that every counter in every store, and many stores use major windows to feature the coolness of the stick. The average woman feels she is out of fashion if she does not have a stick to talk about, or exhibit from her own hand-bag.

However, a surprising number of buyers are convinced that the phenominal sale of sticks is only an introduction to better days, and that the use of fragrances in all sizes and forms is on the upswing.

West Coast Retailers Cautious; Reduce Lines, Emphasize Specials, Concentrate Promotions

DON COWLING

Los Angeles—The pressure is still on out here for reduction of inventories. At the I. Magnin chain of top specialty stores, buyer Van Venneri said that they are dedicated to the elimination of lines carried and the paring of items in lines retained. They find, she claimed, that they can fine comb their lines without seriously cutting down on overall sales. In fact, she said, the lines which have the fewest items will receive the bulk of their attention since sales pressure on them brings better results than the attempt to do a job on an entire line.

Promotions

The demonstrator for a perfume line in the Broadway which requires a complete case, together with additional display on the back shelves, told us last week that in one day she had sold one bottle of perfume, at $4.50. Toilet waters and cologne, in one fragrance, has sold fairly well. Also at the Broadway we were told in the executive office that they are looking forward with anticipation to a number of price specials that will be launched next month. Dorothy Gray cleansing cream at half price, Quinlan strawberry masque, hormone cream, and hand cream, all at half price, and Rubinstein's Beauty in Pairs, ten regular items carrying at the price of the original with a special introductory package of another item, will be featured.

A new item is being launched here, two creams divided by a partition in a single jar. The general attitude of buyers toward it is a waiting one. Several buyers have said that their response to the offer of the merchandise was that the sponsors create the demand. With the pressure on for reduction of inventories few stores are willing to initiate the promotion at this time.

Open Demonstration

At Bullocks Downtown Max Factor conducted last week a very close approximation of the old fashioned open demonstration. In a circular booth in the main aisle of the toiletries section a Factor traveling demonstrator conducted a class in facial cleansing and makeup, while the regular Factor demonstrator handled the sales. The special demonstrator wore the traditional towel around her neck, and her hair was peeled back. There were no white aprons nor soap boxes to elevate the girls above the floor, but the effect was truly nostalgic to old time toileters. The regular demonstrator making the sales was very busy.

Hair Lines Excellent, New Orleans Reports

LEE MCKENNON

New Orleans—Summer weather with its hatless informality seems to have made customers extremely hair-conscious, retail buyers indicate. Tintaire got off to a good start here and has kept right on selling, to new and repeat customers alike. Women like its quick action, and the complete directions which accompany the tint help sell the product. Buyers say that the Toni home-waving kits still outsell any other competitor, thanks to the extensive advertising plus quality, one buyer thinks. However at one department store, Lilt was rapidly gaining favor with the customers. Its nice packaging and advertising has attracted considerable trade.

New Rubinstein Line

A Helena Rubinstein's representative introduced her new line of cosmetics for the hair at one of the department stores earlier this month and did a highly satisfactory business which has continued since his departure. The representative was especially well-informed and his individual advice to the customers was a nice sales boost. Rubinstein's newspaper ads, picturing 12 items of her line, bring excellent response.

Scents Peppy

Buyers are still puzzled but happy at the continued pace of perfume and essence sales. Stick colognes, especially the small sizes, and liquid colognes go nicely but the heavier scents are selling far better than usual this summer and no buyer is complaining. They are wondering if better packaging and advertising are responsible. For example, Lanvin's purse size perfume which looks like a lipstick is moving very well as does its companion piece, a larger container of cologne. These are the items on which Lanvin makes but one shipment each spring, and which do not appear at other seasons. The buyer says that customers often purchase a number of the attractive metal packaged perfume and cologne bottles for gifts and Arpege seems to be the favorite. It just proves what packaging will do for a product. As if we didn't know already!

Buyers are now carrying empty plastic squeeze bottles on their counters and report that they do so because the practice has boosted sun-tan lotion and scent sales.

Solid Colognes, Sun-Tan Oil Lead Weak Buffalo

MAGGIE FLEMMING

Buffalo—Toiletries volume here is, generally speaking, far short of bristling, the only constant activity concentrating on solid colognes and sun-tan lotions.

At William Hengerer Co., Elizabeth Arden's Blue Grass promotion is proving popular, the $3.00 bottle notching up the largest percentage of sales. The Rubinstein hair promotion, sparked by demonstrators from Rubinstein's Fifth Avenue Salon, was attracting a good amount of business. They explained to customers how to add new color and glow to their hair via Rubinstein's Color Tint and Color Tone Shampoo; also Cover Tone, and Silk Sheen hair conditioner. The success of their presentation was enhanced by a front window display, a front counter booth featuring beautifully tinted wigs from Rubinstein's Salon, plus elevator and vestibule cards.

Glamour Promotion

The Glamor promotion here enjoyed fair success, tieing in the beauty aids presented in a current feature article in Glamor magazine: Breck Hairdress, Charles of the Ritz Sun Bronze, Faberge Duette, Tony Permanent and Milkmaid Emulsion. New novelty item going over with a bang are the Shamp-O-Pads, to be attached to a comb and used for hair cleansing, selling at $1.25.

At J. N. Adam's, Gourielli's Moonlight Mist toilet water and dusting powder are continuing as a summer favorite. Prince Matchabelli's $1.85 package, combining liquid and stick cologne is still going strong. Lenteric's Debo spray-type deodorant is threatening to overrun all others, its daintily feminine pink plastic bottle being an attractive addition to any dressing table.

In novelty goods, Bourjois flower-printed white bottles of cologne, featuring colorful floral sprays of the fragrance inside, is the most outstanding. "Mist," the breath-taker, is doing very well with a special, offering the 50¢ size free with every $1.95 size purchased. Tintair sales remain high here, with Lilt still the top-of-the-list permanent.

Right now, plastics is the magic touch in packaging. Women fairly vibrate to all its variations in shape, color, method of dispensing and 'feel.' Then too, its light weight and shatterproofness are attractions. It all helps women to reach for their purse.

Vacation and Sun Products Promotion Profitable; Tie-in Counter Selling Experiment Successful

JEAN ROBERTS

Dallas—Retailers here are thanking their lucky stars for the sun. The sun's scorching rays have cornered the public against the cosmetic counters where they are left gasping for suntan lotions, sunburn cream, shampoos and deodorants.

Suntime promotion is at its peak in Dallas. Generous newspaper advertisements stress sunburn creams, stick colognes and perfumes; counters are loaded with displays and samples. Advertising has also featured easy-to-pack cosmetics and the importance of skin and hair care on vacation trips.

Hot Weather Tie-in

In general, retailers have not been caught asleep. One department store has had some special sessions with clerks about vacation merchandise, pointing out how one item can lead to the sale of another if the clerk is on her toes. The sales slogan is complete care of the body and hair during hot weather. Suggestions were made such as: "If a customer comes in to buy suntan lotion or tanning oil, you can be pretty sure she is either going on a vacation or expecting to be out in the sun. Then is the time to ask about a darker powder, powder base, depilatory, hair lotions, et cetera, pointing out the need. Lipstick and nail polish also need to be changed with a darker skin.' This department reports that this little coaching has brought results and the clerks have made a sort of game out of this tie-in selling.

Pittsburgh Sales Girls Queried on Customers' Brand Preferences; the Importance of Being Known

LENORE BRUNDIGE

Pittsburgh—What makes a woman buy one brand product over another? We asked those who have personal contact with the customers and should know some of the ansers: the sales girls.

Unless a woman comes in with her mind already made up, is it the package, or the contents, that win?

Packaging Considerations

The attractiveness of a jar or bottle is important, the girls tell me, but the question most often asked today is: "Is it plastic?" When an item is packaged in both plastic and glass, the lightweight bottle usually wins. Another consideration of bottles is the way they "feel" in the hand, and whether they are likely to slip out of the hand easily. One of the new skin products (an oil and astringent combination) can be pointed out specifically. It is pretty in color, slender and comfortable in the hand. But—some complaints have been received that the smooth surface of the bottles makes it slip out of the hand too easily, especially if the contents remain on the hand while applying (and they do).

What Is It For?

The salesgirls say that the directions for use and an explanation of the product's purpose and function often make the difference between sale and no sale. Both should be amply covered. When the printing is so that reading is difficult, a woman who isn't sure just what she wants usually takes the product that gives details. Too much printed material is as bad as not enough. But concise, direct description IS important, they say.

That Sunday Dress

As for the dressed-up look, that comes in for special attention when the item is purchased for a gift. But if the prettier jar costs more, and the contents of the plain jar accomplish the same results, the fancy one isn't purchased.

In the matter of packaging, I am told that many customers are not always content to look at the sample to determine whether the contents are to their liking. They want to "see inside." As a result, if the package must be taken apart in such a way that it won't go back together again with ease, a number of slightly-used-looking bottles or jars of merchandise are left on hand.

Importance of Being Known

And the final clincher in making a sale, the girls say, is whether the woman has ever heard of the brand name before. Even if the new product is superior, the general reply from customers is, "Oh, I've never seen that—think I'll prefer the one I've heard about."

Solid Colognes Solid in Cincinnati; Hair Dyes, Wave Kits Hot; Stick Deodorants Strong

MARY LYNN WHITE

Cincinnati—Solid colognes continue to be a main source of revenue at toilet goods counters here, with all buyers commenting upon the popularity of the solid scents in a way they never mentioned liquid colognes. In fact, the dollar volume is greater, they explain, not because the stick colognes don't "go as far" as the liquids, but because women use them so much more frequently. They hope that the novelty of the cologne sticks have attracted women previously unaccustomed to using fragrances, thus making good prospects for other types of scent in fall and winter.

Shillito sent out 100,000 inserts on D'Orsay, and the response was immediate and prolonged. The new Coty stick, all unadvertised here as yet, was selling quite well (a couple of the buyers credited smart and enthusiastic salesgirls with this). A picture of Shulton's attractive purse stick brought a deluge of calls to one of the town's fashion editors, who was amazed to find that many women were completely unfamiliar with this "new" form of fragrance.

Hair Items Hot

Another newspaper article, on a permanent wave shampoo at $1, produced a large number of inquiries and, as it turned out, purchases. Both the shampoo mentioned, Jene, and another one, Donna Lo, were selling very well. The usual home permanent kits and refills were walking off the counters as hot weather induced women to cut their hair often.

Hair colors continued good, with Hairmetique doing unusually well at Rollman's. Tintair is very popular here and so is Blensol. Women here are very confused about whether "tints" will wash out. Clarification is in order.

Stick Deodorants Strong

Hot weather slackened the traffic through stores, but had one good result: deodorant sales swelled. Most buyers reported that Stopette is this city's most popular, but several mentioned stick deodorants as runners-up. The sticks have the advantage of being cooling to the touch, without any "drying" period necessary, but it's amazing that the manufacturers can't find something more convenient than tin foil in which to wrap the bases of the sticks. They fail to prevent messy fingers.

Creams Stand Up

In spite of extremely hot and humid weather, the usual slackening in the use of treatment creams did not occur in some lines. Yogurta, for instance, the cream which contains yogurt, has been "hot" ever since it was mentioned on TV (a newspaper ad had netted nil), and Rubinstein's deep pore cleanser has continued its good turnover. Ditto for Marie Earle's Aralinn, which will be promoted soon by Shillito.

Indelible lipsticks, both the familiar brands and the new ones popping up, have been accepted with open arms, and women buy them whether advertised or not. One buyer (Rollman's) commented that Rubinstein's has proved to be about the best promotion he has had all year.

Departments featuring summer items reported good figures. Coppertone is the favored sun lotion here (its own color makes women think they're tanning faster).

Boston Buyers Face Sales Resistance

RUTH RESELAND

Boston—Buyers here are seriously worried about consumers' resistance, which has been steadily maintained for the past half year without any relief in sight.

The situation is so critical that one buyer stated that the only products which do a really worthwhile volume are specials, half-price items, and those accompanied by free trial bottles. And even these are losing their sales pull. The customer, flooded by such offers, is rapidly becoming insensitive to them. Carried to its logical conclusion, the old joke about the boss instructing his buyer to purchase only stock below cost will become a horrible reality. Right now, it appears sometimes as if stores are paying the customers to relieve them of their merchandise.

Buyers Play Safe

The consequences should be all too clear to the manufacturer. Buyers are extremely reluctant to secure adequate inventories. They are reducing the lines they carry to their absolute minimum, cutting down particularly on some of the more outlandish shades of lipstick, face make-up and nail polish, and on some of the less popular fragrances. An even less desirable result is their steadily increasing resistance to new products—products, in fact, which might have turned out to be best-sellers, for the consumer hasn't built up sales resistance against them yet, and because of their curiosity appeal. Suffering most from the low level of business is the small manufacturer, who simply doesn't get the chance to break into the field. Buyers simply do not care to take the risk.

Tied closely to the lack of sales activities, stores here are reluctant to invest still more capital in their stock through advertising. Sizzling as the weather has been lately, promotion has been only lukewarm. Leaders, of course, are the summer items, particularly when marketed at half-price, as they usually are. Stick colognes, suntan lotions, shampoos, and deodorants head the list.

Goodbye to Glamour

In general, where the functional nature—rather than the glamour side of cosmetics is emphasized, sales tend to increase. Women do not need to be convinced that they perspire rather freely during the summer, that they are likely to get sunburnt, and that hatless hair becomes dirty faster. If only advertising would play up the practical, functional nature of cosmetics all year around. We queried salesgirls on this point, and they unanimously agreed that glamour appeal should be shelved until the customer feels that she can afford it. The Liggett drug chain ran a grocery-store type of advertisement—definitely without glamour appeal – to their profit. Items advertised—with illustrations—included stick colognes, suntan aids, deodorants, and shampoos.

Widespread department store advertising of Dorothy Gray products brought some very encouraging demand. Whitney had excellent results from an advertisement featuring its Hot Weather cologne, a regular $2.00 seller, at $1.00 per eight ounce bottle. Jordan Marsh did some very satisfactory business with its solid deodorant at $1.00 and Gray's depilatory wax, advertised as being easy to use, appeared to be doing quite well at $2.50. A small advertisement featuring Brisk, lavender bath refresher, turned out to be a surprise performer for S. S. Pierce Co.

Nevertheless, except for the more outstanding hot weather items, turnover is consistently below expectations. As one buyer, just returned from vacation, remarked: "I should have stayed out in the country."

NEW PACKAGING and PROMOTIONS

Charbert display carton

PARFUMS CHARBERT, INC. has added Gentlemen's Spray Deodorant to its men's line. The product comes in a brown plastic squeeze bottle and is packaged for shipping in a display carton holding twelve 2½ ounce bottles. Retail price is $1.25.

MOLYNEUX has a newly-designed bottle and carton for the $5.00 size of its Le Parfum 'Connu' toilet water. The bottle, made of clear glass, is shaped like a Grecian column and has a black screw cap. It holds 3⅞ ounces.

DERMETICS is introducing a smaller version of its original beauty wallet, containing a lipstick, a powder puff, rouge puff, and a mirror. Makeup comes in three assortments for blondes, brunettes and redheads. Promotion literature printed like a fake dollar bill is inserted in each wallet. The product comes in red simulated pigskin and retails for $2.95.

BRISTOL-MYERS CO. has started a 25 cent coupon redemption promotion of its new Vitalis hair cream. The customer, upon mailing the carton front, receives 25 cents. The offer runs until October 31.

MAX FACTOR is adding a soap and a talcum powder to its turquoise and pink packaged World of Beauty line. The talcum powder comes in a five ounce cylinder top shaker. The soap sells for $1.20 per box with three cakes, the talcum powder is priced at 85 cents. Sales Builders, Inc. has introduced a dealer counter case for displaying and stocking of Max Factor's five new Signature men's toiletries. Through a plexiglass front the Shower Shampoo is presented as hanging from a bathroom faucet, the Lazy Shave product is placed above it, and the other three products are on shelves alongside them. Behind this display is a copper-colored masonite stock cabinet. A display card on top of the case is replaceable.

CHARLES OF THE RITZ is using bottles with new decal transfers fired into the glass for its Spring Rain cologne. The stylized full-color designs are said to last for the life of the container. The process was developed by the Meyercord Co.

Charles of the Ritz Spring Rain bottle

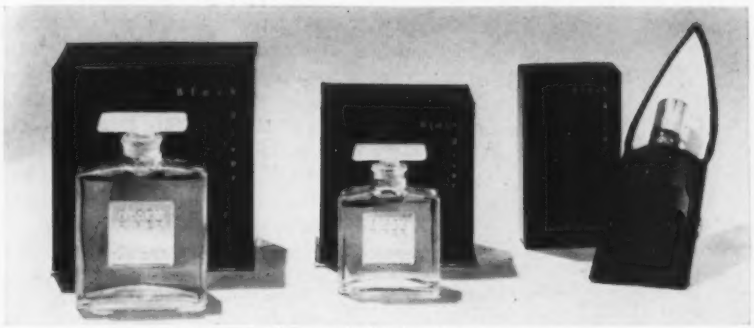
COTY is introducing a solid cologne in the same fragrances of its four perfumes L'Aimant, L'Origan, Emeraude, and Paris. Wrapped in metal foil, it is packaged in a glass bottle. The retail price is $1.50 per 1 oz. stick. Coty has completed a window display contest among display directors, centering around its Muguet de Bois perfume and perfumed accessories. Two directors tied for first place were each awarded $500, a third prize consisted of $200, and five honorable mentions were made.

JACQUELINE COCHRANE is introducing a new color for fall, Perk-Up Red, in its Perk-Up Set. The package consists of sectional cylinder, holding cleansing cream, foundation, night cream, Perk-Up Red rouge, and a section with sifter for face powder, plus a spatula, for refilling. Also included is a lipstick in the new shade. The set retails for $3.00.

HARRIET HUBBARD AYER is introducing a fall shade in its stay-on lipstick, cream rouge and dry rouge lines. Called Clove Carnation, it is described as a deep russet-red. The Ayerfast Clove Carnation lipstick sells for $1.25.

HELENA RUBINSTEIN is marketing an automatic refillable eyebrow pencil. Made of white plastic with gold printing, it comes with black, brown, blue, or green leads. It is the size of an ordinary pencil, and the lead can be retracted into the tube. It retails for $1.25; refills sell for 50 cents per two leads.

Helena Rubinstein's automatic refillable eyebrow pencil



Leila V. Jackson's Black River perfume packages

LEILA V. JACKSON has launched Black River perfume in three sizes: 1 oz. to retail for $12.50; ½ oz. to retail for $6.50; and 2 drams to retail for $2.50. The packaging motif is carried out to advantage with jet black boxes with gold lettering. The 2 dram vial comes in a black silk container enclosed in a box.

SCHIAPARELLI is giving a summer promotion to the following eau de colognes: Shocking at $2.75, Sleeping at $3.00, and Zut at $2.75. Also featured, perfumed in these same fragrances, is the Schiaparelli Bath Sponge, a disk which is said to turn into a full size wash cloth when placed in water. Packages of ten bath sponges retail for $1.75. Also being marketed are Eau de Sante, a body rub lotion, at $2.00 and Body Radiance sun-tan oil in a four ounce non-spillable bottle at $2.00.

YARDLEY OF LONDON is giving its lipstick shade Pretty Pink a newspaper, radio and television advertising promotion. The product sells for $1.00.

PEGGY SAGE is introducing two new hand creams, a new nail polish and lipstick shade, and is also invading the soap field. Its Hand Smoother and Softener Cream is said to soften the skin and combat chapping, its pink colored Finishing Cream is designed for use after washing and before going out of doors. Each retails at $1.50. Packaging consists of a black jar with a grey cap and pink ceramic baked lettering. Peggy Sage is giving its new shade, Orange Spice, a summer and fall promotion. It comes in the Crystallin Finish nail polish, the regular size Shimmer lipstick and the pen shaped Convertible lipstick. Each of these products retail for $1.00. Peggy Sage's French Milled soap contains lanolin, is pink colored and slightly concave shaped, resting only on four corners thus preventing sticking to surfaces on which it is placed. It comes in two scents, Sandalwood and Sweet Grass. It is

Sage's French milled soap

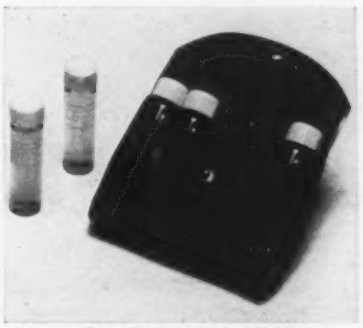
packaged in two forms. A small black, grey and pink box containing three cakes in either scent retails for $1.50. Soap Chest, a gift package, is a three drawer natural-colored miniature size chest containing three bath size soap cakes, three hand size and six guest size cakes in either scent. It sells for $7.50.

SHULTON, INC. announces four new packages with an August 21 delivery date, and a fifth one for September 21. Friendship's Garden Refresher is a combination package of toilet water in a hobnail bottle and a solid concentrate in a filigree case for purse use. It retails for $2.25. Desert Flower Cache consists of two-purse-size items, a perfume in hand-carved vial with a green velveteen bag and a stick cologne, also in a carved case. The combination comes in an acetate window frame box and sells for $2.50. Early American Old Spice Charm Box is an acetate box with a ribbon on top, containing a tiny decorated flacon with roses and spice perfume, tied with a red cord to a green satin sachet pillow. The package sells for $2.25. Cream of Almond Soap has been repackaged and comes now in a box of four cakes, selling for $1.50. The fifth item, with the September delivery date, is Early American Old Spice Vanity Box. Described as a completely fitted toiletries set, it contains a four ounce bottle of toilet water, a seven ounce box of dusting powder, an one ounce bottle of body sachet, a cake of bath soap, five tubes of bath salts, and a decorated bottle of perfume with a red velvet bag for purse use. The box lid has a mirror on the inside. The entire set retails for $7.00.

FORMULA A-10 is Richard Hudnut's new hair tonic. It is claimed to help remove loose dandruff, to prevent scalp disturbances caused by fungi and bacteria, to stimulate circulation, to banish hair odor, and to give hair a sheen. Its price is $1.

PRINCE MATCHABELLI will introduce a new cologne perfume in September. The product, Beloved Cologne Parfumee, comes in a crown shaped bottle and is available in two sizes. The two-ounce bottle costs $2.50, the four-ounce size retails for $4.00.

MARY CHESS is introducing a travel kit of its Roman Bath Oil. It contains five vials of the product, each in a different fragrance, and each designed for several baths. The kit is made of washable brown sharkskin plastic, is envelope-shaped,



Chess Roman Bath Oil kit

with a snap button. Delivery to department stores and specialty shops is set for October 1. The price is $4.50. The Roman Bath Oil line will be promoted in October.

DEARBORN SUPPLY CO. is test marketing Chlor-O-Creme, its new face cream cleanser, in Chicago. Promotion stresses that the product contains chlorophyl and penatrin.

Theory of Tastes and Odors

WE were interested in the article on "A Theory of Odors" by G. B. Kistiakowsky (*Science*, **112**, 154 [1950]) because we have been independently approaching the same problem from an experimental direction. Our results are not sufficiently advanced to enable us to draw final conclusions regarding the mechanisms of taste and smell, but the results we have so far obtained suggest that the primary mechanism of both these senses might be that of interference with one or more enzymes by the substances possessing the properties of odor or taste.

It has been shown by one of us (Bourne, *Nature*, **161**, 445 [1948]) that, by Gomori's histochemical method, alkaline phosphatase was present in a relatively high concentration in, or in the epithelium overlying, the taste buds in various mammals. In addition, the olfactory mucosa was also found to contain an appreciable concentration of this enzyme.

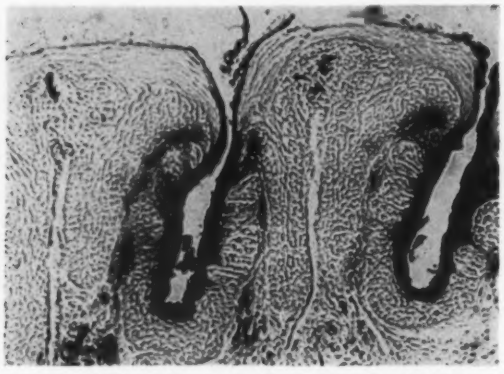


Fig. 1 Alkaline phosphatase reaction in the papilla foliata of the rabbit. The epithelium overlying the taste buds and at the bases of the papillae is seen to be heavily impregnated, indicating a high concentration of the enzyme in this region. Elsewhere there appears to be little phosphatase. (×120.)

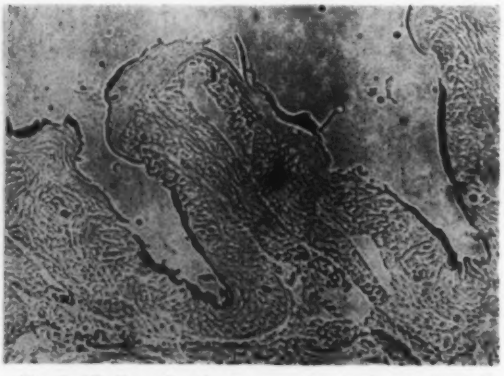


Fig. 2 Alkaline phosphatase reaction in the papilla foliata of the rabbit after adding 0.05% of vanillin to the substrate. Some reaction is still present in the epithelium, but it is greatly reduced. (×120.)

Working on the assumption that part of the mechanism of tasting may be associated with the inhibition of this enzyme by various substances with taste properties, studies had been made on the effects of such substances on the Gomori phosphatase reaction in the papilla foliata of the rabbit's tongue. We have found that vanillin strongly inhibited the gustatory phosphatase reaction (Fig. 1). In the rabbit this reaction is in the epithelium overlying the taste buds, and it was found that a concentration of 0.05% of vanillin in the substrate produced quite a strong inhibition of the reaction, and at a concentration of 0.5% the reaction was completely abolished (Fig. 2). Histochemical demonstration of alkaline phosphatase was also inhibited to varying degrees in kidney, gut, and bone, and in nasal mucosa by vanillin.

The substrate used for demonstrating this gustatory phosphatase (or phosphatases) was sodium β-glycerophosphate, but the following substrates have also given positive results: hexose diphosphate, muscle adenylic acid, yeast adenylic acid, and adenosine triphosphate.

The inhibiting effects of vanillin and other substances on the ability of the gustatory phosphatase (s) to split these other substrates have not yet been investigated.

Obvious inhibition of gustatory phosphatase has also been found with infusions of tea and with capsicum, but sugar, sodium chloride, and quinine have no effect. Infusions of coffee, oil of aniseed, and oil of peppermint have a slight effect.

In addition to the phosphatase (s), we have also shown histochemically that a simple esterase is present in fairly high concentration in the taste buds and to a much smaller extent in the epithelium of this region of the tongue. There was a fairly high concentration of this esterase also in the neighboring accessory salivary tissue. The enzyme was demonstrated by Gomori's modification of the Nachlas-Seligman method (*J. Natl. Cancer Inst.*, **9**, 415 [1949]), which is as yet unpublished.

The histochemical reaction for this esterase is inhibited strongly by quinine but not by sugar or sodium chloride. We have not as yet established whether these inhibitions are true interference with enzyme activity or whether they represent some interference with the histochemical reaction. However, the points we should like to emphasize are:

1) We have found in the papilla foliata of the rabbit 2 enzymes (or groups of enzymes) of the 4 groups postulated by Kistiakowsky as being required to explain the mechanism of smell (and presumably also of taste).

2) We have found so far that the histochemical reactions of these enzymes (or groups of enzymes) are inhibited by some substances that have a well-defined taste and are not inhibited by others.

We had not intended to publish this work until we had accumulated many more data, but the remarkable coincidence between the experimental results we are obtaining and the theory propounded by Kistiakowsky influenced us to make this preliminary report.—*Abdel Fattah El-Baradi and Geoffrey H. Bourne, Dept. of Histology, London Hospital Medical College. Published by courtesy of Science.*

The double standard of dollars created by the tax situation offers enormous opportunities for the profitable expenditure of advertising funds in increasing volume, increasing net profits after taxes, and building customers and good will which will be reflected in important capital values.—*J. K. Lasser.*

Success consists not so much in sitting up nights as being wide awake in the daytime.—*Anon.*

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The Empress closure and smart label combination make Duraglas stock-mold bottle A-6839 a highly individualized sales package.

MAKE-UP makes the difference!

Highlight your product with package individuality

When you give your line a family look in a package personalized for your product, you help it gain consumer attention at the point of sale. You can do it, and still keep within commercial limits on container costs. How?—Pack in Duraglas stock-mold containers.

Owens-Illinois has more than 1400 different sizes and styles from which you can select one that is exactly right for your product. Then, skilled packaging designers at the Duraglas Center turn it into an effective salesman through an unusual label and closure combination.

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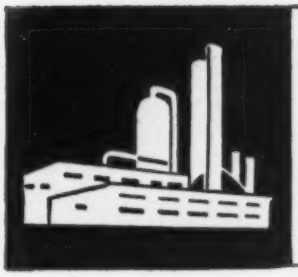
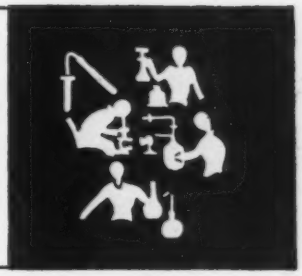
Duraglas bottles are protectors of quality

OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES



Soaps



Points on the Drying of Soap

Each particular make of soap reacts slightly differently to chilling and drying. . . . The better the quality of the soap stock the easier it is to achieve uniformity in drying. . . . Overdrying

PAUL I. SMITH

AT the outset it should be stated that it is not possible to formulate any hard and fast rules to govern the drying of soap in conventional machines, as the conditions of chilling and drying must be adjusted to suit the peculiar characteristics of the soap being processed. Many factors can help to prejudice the success of the drying process, e.g., the presence of highly unsaturated fatty acids, colour bodies, odour bodies, impurities of various kinds, etc., all have a noticeable effect on the drying properties of the soap. Low titre soaps sometimes cause trouble in the dryer through the formation of sticky, dark coloured substances which stick to the band.

Generally speaking, the purer the oil or fat employed for saponification, the better and more uniform will be the drying. This is borne out by experience with imperfectly purified fatty acids. Colour bodies and impurities which are not removed from these acids by the usual processes of distillation and filtration are liable to cause trouble during drying owing to their instability, and the fact that their degradation products formed during saponification are liable to undergo undesirable oxidation changes when heated. The identity of the oil employed, i.e., whether marine, vegetable, animal, influences the physical characteristics of the soap during drying. Soap made from liquid groundnut oil with an iodine value of 92 would

Paul I. Smith

have different drying characteristics to the hardened oil with an iodine value of 59. It is necessary, therefore, to adjust the drying conditions to suit the particular kind of soap being manufactured.

Chilling and Drying

Turning from the soap to the actual mechanics of chilling and drying, it becomes obvious that the success of the latter depends in a large measure on the physical form and uniformity of the soap ribbons. The chilling machine must, therefore, be designed and operated so as to produce ribbons of unvarying thickness and width. By maintaining this, it then becomes possible to exercise a better control over the actual drying. This has, of course, the object of removing the free moisture down to about 11-15 per cent, depending on the type of soap being produced. Drying may be controlled in several ways, for example, by adjusting the steam pressure of the heating units, by increasing or decreasing the speed of the bands on which the soap ribbons pass through the dryer and by varying the volume humidity and temperature of the air passing through the unit. Success in drying is greatly influenced by the degree of insulation. The presence of draughts of cold air in the system can seriously jeopardize the process by causing uneven and localised drying of soap ribbons.

Conclusions

Summing up it can be said that:

(a) It is not possible to prescribe drying conditions for all soaps on the basis of a successful experience with just one or two types. Each particular make of soap reacts slightly differently to chilling and drying. It is, therefore, necessary to be able to modify drying conditions quickly and efficiently so as to suit specific makes of soap.

(b) The better the quality of the soap stock, the easier it is to achieve uniformity in drying. Soaps made from oils containing highly unsaturated fatty acids are more difficult to dry than those from saturated fatty acids. Colour bodies and impurities present in fats are potential sources of trouble.

(c) Some soaps tend to dry more

quickly than others, depending on their chemical constitution and the drying system must be capable of fine adjustment so as to ensure that over-drying does not take place. Over-drying is just as detrimental to the finished soap as under-drying. Whereas the latter causes trouble during milling and tabletting, over-drying is usually the cause of crumbling and grittiness in soap. In both cases, serious deterioration of the soap is caused.

It is unfortunately true that shortcomings in drying can never be completely remedied, therefore, every care needs to be taken to make certain that optimum conditions are maintained and that really efficient systems are employed capable of accurate control.

Bentonite As a Soap Additive

BENTONITE, sometimes known as Wilkinite, is a colloidal clay, chemically it is predominantly a hydrous silicate of alumina. The mineralogical name of the clay is derived from Fort Benton, Wyoming from which place the first commercial shipments were made in 1888.

It is known that long before white men settled in the Wyoming and Dakota areas the Indians used bentonite for laundering clothes.

The clay occurs in stratified deposits, in putty-like form. This is mined, graded, disintegrated and finally dried at carefully controlled temperatures. The dry clay is a grayish-white granular material and contains about 8 per cent moisture. For ordinary commercial purposes this is pulverized so that approximately 90 per cent will pass through a 200 mesh sieve; finer grades are able to pass 95 per cent through a 325 mesh sieve.

Bentonite varies in characteristics according to the area from which it is mined, e.g. Western bentonite sometimes known as "Alkali" grade, is characterized by unique swelling and gelling when dispersed in water and contains about 90 per cent colloidally subdivided particles. The value of bentonite to the soap manufacturer can be summarized as follows:—

1. It is a less abrasive filler than talc and similar compounds.
2. Bentonite is easy and economical to add to soaps.
3. Because of its active colloidal properties this clay improves the detergency of soaps.
4. Owing to the zeolitic base exchange action of bentonite it is able to soften water and to prevent the formation of sticky and insoluble calcium and magnesium soaps in hard water.
5. The addition of bentonite helps to form stronger suds and so improves the laundering properties of soaps.
6. The remarkable emulsifying properties of this clay facilitates the removal of grease from surfaces during washing. It is worth noting that one of the most important uses of bentonite is an emulsifying agent for asphalt and oils.

The addition of bentonite to soap does not in any way detract from the eye appeal of soap. It imparts an extra "soapiness" and has no masking or deleterious effect on perfumery ingredients. Too much Bentonite will, of course, spoil a good soap by giving it a somewhat "slimy" feel. When used discreetly there is no doubt that this colloidal clay is not only a good filler for soaps but a most valuable additive possessing marked detergent and emulsifying properties.

Precipitated Chalk As An Abrasive in Soap Powders

WHERE there is a need for a light abrasive, pure calcium carbonate in the form of precipitated chalk is a familiar choice. It offers several important advantages to manufacturers of scouring powders and special abrasive soaps, e.g.,

1. The powder is without odour or taste and has no masking effect on perfumery ingredients.
2. It is free from any marked alkaline reaction and will not, therefore, affect the alkalinity of the soap.
3. Pure chalk is white in colour and easy to mix with tinted ingredients.
4. Although the particles of chalk are exceedingly small, it is possible by mechanical grinding and elutriating to produce powders of the same order of fineness. Most high grades of chalk to be used as light abrasives in polishes, dental preparations and scouring powders, etc., are able to pass through a sieve having 200 meshes to the inch, or even more.
5. Chalk is able to absorb a certain amount of water, dependent upon its grade and density. It is always advisable to select those chalks having a constant absorption value.

A very important factor to bear in mind is that the bulking value of the chalk should not vary from batch to batch, or consignment to consignment of particular grades. This is most desirable to ensure, otherwise uniformity of production may be difficult to maintain. The bulking value or density of chalks varies, of course, from grade to grade, e.g. there are dense, medium and light chalks, each grade possessing distinct and characteristic properties.

News of the Industry

F.T.C. Bans Alkaline Color Shampoo Claims

The Federal Trade Commission has ordered a Chicago firm to stop advertising that its color shampoo will color hair. The commission found that "reliable and scientific opinion" is that the product could not color hair because it produced an alkaline, instead of the required acid medium.

Three Soap Companies Cut Soap, Detergent Prices

The Department of Agriculture has announced that soap production for 1950 amounted to 3.5 billion, compared to five billion pounds in the record year of 1944.

Per capita consumption of soap was said to be the lowest since 1921. The reduction is believed to be due to inroads made by synthetic detergents.

Three Soap Companies Cut Soap, Detergent Prices

Three major soap companies have reduced wholesale prices of soap and soap products and detergents. Lever Bros. cut prices of bar and packaged soaps, detergents and synthetics 3½ to 4½ and 11% on Spry. Procter & Gamble made similar reductions on its Crisco and other products. Colgate-Palmolive-Peet Co. has stated that it intends to follow suit. The companies attributed the reductions to lower costs of fats and oils.

New Lever's Plant Turns L. A. Into Leading Soap City

The recent opening of Lever Bros.'s new $25,000,000 soap, detergent and shortening plant is believed by trade circles to make Los Angeles one of the foremost soap products manufacturing areas in the country.

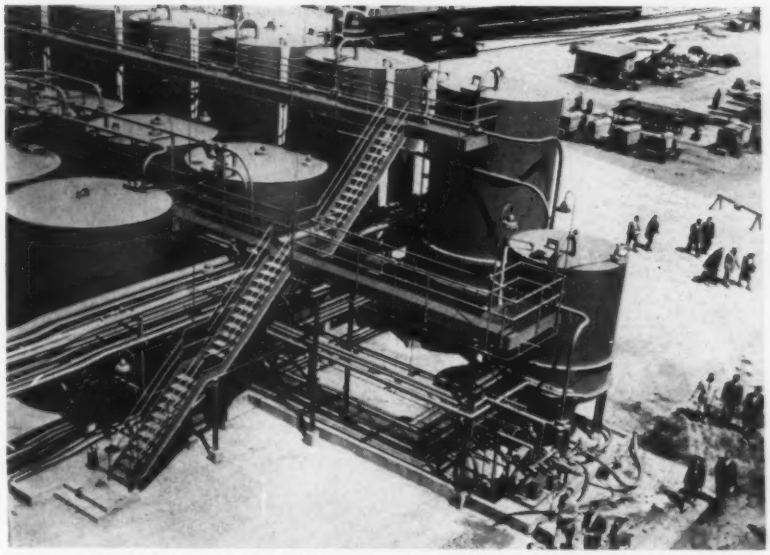
The new plant—eighth in Lever Bros.'s current expansion program—consists of six major buildings and facilities occupying one-third of a 30-acre plot eight miles east from downtown Los Angeles. Charles T. Atwood, with 21 years of experience in soap and shortening manufacture with Lever Bros., is the plant's manager.

From the new factory will come virtually all of Lever's products, including Lux Toilet Soap, Lux Flakes, Lifebuoy Soap, Rinso and Silver Dust, soapless detergents, No-Rinse Surf and Breeze; and its all-vegetable table shortening, Homogenized Spry. Provision has been made for the later manufacture of Good Luck Margarine.

Most of the processing equipment is located out of doors, taking advantage of the warm, dry climate. Scientific safeguards eliminate smoke and odors and special water conservation equipment is employed.

Production from the new plant will be for distribution in 11 Western states previously supplied from Lever plants in the Mid-West and East. The states to be covered by distribution from the Los Angeles plant are: California, Oregon, Washington, Nevada, Idaho, Utah, Arizona, Montana, Wyoming, Colorado and New Mexico. Sales in this area are directed from Lever division sales offices in Los Angeles headed by Roland Geimer, division sales manager. Sales offices are also maintained in San Francisco and Denver.

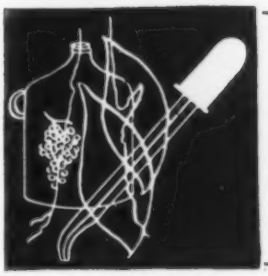
Directors present at the opening were: chairman John M. Hancock, president J. J. Babb, F. J. Lunding, chairman of the Lever executive committee and chief executive officer of Jewel Tea Co.; William H. Burkhart, Lever production vice president, under whose direction the plant was constructed; J. Laurence Hayworth of the parent company, Unilever & Lever Brothers, Ltd., who came from London to take part in the opening ceremonies: Charles A. Massey, president of Lever Brothers Ltd., of Canada; Robert B. Smallwood, president of Lipton Tea Co.; and E. Lee Talman, Lever administrative vice president.



The new $25,000,000 Lever Bros. plant in Los Angeles, Cal., is attracting a great deal of public as well as trade attention and is making the city soap conscious. Above visitors inspect the tank farm which stores the raw supplies for the different products.

First products from the new plant were loaded aboard a helicopter for delivery to the governors of the 11 western states which the new plant serves.

The kettle room was of major interest to guests at the recent opening. The ten huge soap kettles yield about 170,000 pounds of soap at each boil. One boil produces about 165,000 boxes of Lux Flakes or about 580,000 cakes of Lux Toilet Soap.



Flavors

Plant Extractives for Flavors

Swing away from synthetic flavoring materials to natural plant extractives noted. . . . Principal oleoresins, solid extracts and fluid extracts for use in making finished flavoring extracts.

E. G. ALLISON*

THE vegetable kingdom provides us with a rather extensive range of materials that have been employed throughout the ages in foods, condiments and beverages for flavoring and odor qualities. Specifically those that will be discussed have the approval of both The Food and Drug Administration and The Department of Agriculture for the stated use in this industry.

Plant extractives make available the varying properties of vegetable material in a more convenient form for compounding than is possible with the crude material itself. We meet these plant extractives in the forms of fluid extracts, tinctures, solid extracts, oleoresins, alkaloids, glycosides and essential oils.

Fluid Extracts

These generally are prepared by one of two methods—maceration or percolation—with different strengths of hydro-alcoholic menstrua. The finished fluid extract has an alcoholic content ranging from 18 per cent to 90 per cent. Fluid extracts are standardized as to drug strength in that one pint of extract generally represents one pound of the crude material. Fluid extracts as such, are not as widely used in food products as are certain of the other materials to be considered.

Another type of extract sometimes preferred by manufacturers is the tincture. The tincture is much weaker than the fluid extract in that we have a drug potency of either five or ten pints representing one pound of crude botanical. This, of course, reflects a greater cost per crude unit due to the relatively larger volume of alcohol employed.

Solid Extracts.

Solid extracts might well be termed fluid extracts from which the alcohol and some water have been removed by vacuum evaporation leaving, in effect, a product of the consistency of thick honey with approximately 20 per cent of aqueous moisture present.

The extracts described are thoroughly representative of the material employed in their qualities whether flavoring or medicinal.

Oleoresins.

Oleoresins, as the name implies, are generally homogeneous mixtures of an essential oil and a plant resin obtained by extraction with acetone, ether, 95 per cent alcohol and other selective solvents. It is, of course, well known that the presence of the resins qualifies the known quantities of the oil to a considerable extent. This is specially well exemplified in oleoresin ginger. Oleoresins as a class of preparations were introduced into the U. S. Pharmacopoeia at the revision of 1860. Prior to that time, they were classed with the fluid extracts. Only oleoresin Aspidium (Malefern) is admitted by the U.S.P. XIII while Capsicum, Cubeb and Ginger are recognized officially in the National Formulary VIII edition.

Considerably more potent than the fluid extracts, due to the fact that they contain none of the solvents, oleoresins differ from the fluid extracts in that they do not have uniform relation of strength to the drugs. At times, in the manufacture of oleoresins, it is frequently necessary to use a greater amount of the raw material to produce the finished oleoresin, due to natural variations in the raw material itself. Nature has a way of playing tricks and there is very little dependability to be placed in the amount of active principle present in raw materials of different crop years or those produced in different geographic locations. The manufacturer, however, must take the raw material very much as nature provides it.

Alkaloids and Glycosides

Alkaloids and glycosides are pure chemical principles isolated from botanicals by physical and chemical means. These are not as widely employed in the flavoring field as are the oleoresins, with the possible exception of such as caffeine, piperine and certain others.

The use of the various types of plant extractives and oleoresins in

* Essential Oils Div., S. B. Penick & Co. Paper prepared for F. E. M. A.

the manufacture of flavoring extracts might in some degree be compared with the compounding of fine perfume bases. In each case, both entail a very careful and delicate blending of the ingredients to yield a desired finished product of the unusual and piquant character.

Compounding Flavoring Extracts

In the compounding of flavoring extracts, it is often more advantageous to use solid extracts of botanicals having flavoring principles since they not only embody a percentage of the component—volatile oils or bitter principle—but they also contain the natural resins, starches, and other ingredients in the proportion in which they naturally occur in the raw material. These extra components tend to modify the flavor of the finished product and provide the balance of flavor blend more closely to approximate that of the original botanical and at the same time, in concentrated form. A further advantage is that the soft extract can readily be incorporated into aqueous or hydro-alcoholic solutions to which sweetening or other flavoring ingredients may be added with ease.

The more common vegetable materials employed in the flavoring extract manufacturing industry are angelica root, celery seed, chicory root (roasted and unroasted), foenugreek seed, lovage root, St. John's bread and tamarinds.

These are produced almost entirely for their flavoring properties. In addition, there are many others that serve a dual purpose in entering both into the flavoring extract and the Pharmaceutical manufacturing field. These would include such items as kola nut, birch bark, lemon peel, orange peel, wild cherry bark, gentian root, quassia chips, licorice root, sassafras bark and others.

Briefly, the flavor and aromatic principles of some of the more important solid extracts derived from the before mentioned botanicals may be described as follows:

1. Angelica root imparts a peculiarly bitter-sweet pungency. It is quite potent and desirable to a degree as a covering agent as well as a flavor.
2. Celery seed is widely used in food flavoring for the characteristic note derived primarily from its volatile oil content.
3. Chicory root imparts an unusually bitter taste closely simulating that of roasted coffee bean.
4. Coffee is of course familiar to everyone with its characteristic aroma and flavor and somewhat stimulating effect derived from its caffeine content.
5. Deer tongue leaves, also sometimes called wild vanilla, derives its vanilla-like flavor from its coumarin content in association with the natural resins occurring.
6. Foenugreek is known to most of us as the source of a pleasant and somewhat remarkable maple-like flavor and aroma. It is widely used in the manufacture of imitation maple flavor.
7. Gentian root imparts an intensely bitter note and is perhaps more greatly used in the pharmaceutical field than in the flavoring field. It is, however, occasionally employed with other flavoring materials to lend a definite tone to the finished product.
8. Ammoniated glycyrrhizin is the sweet principle of licorice. Its use makes for more standardized licorice flavor.
9. Horehound herb yields the flavor that is perhaps known to all of us from earliest childhood. The true flavor note is captured in the extract to a remarkable degree.
10. Kola nut—both alcoholic and aqueous extraction—enjoy widespread use, particularly in the soft drink manufacturing field. For convenience, two types of the soft extract of Kola are available—the alcoholic, intended primarily for incorporation into liquids containing a relatively high percentage of alcohol, whereas the aqueous, due to its more rapid and complete solubility in a non-alcoholic base, is highly desirable in this medium.
11. St. John's bread is employed largely for the aromatic sweetness which it imparts towards flavoring products lending a honeylike characteristic.
12. Tamarinds in extract form offers an interesting saccharine medium. The before mentioned consist of the more important solid extracts that find their way into the flavoring extract manufacturing industry.

In addition to the solid extracts, the very important and widely used oleoresins of capsicum, cubeb, ginger, black pepper, tonka beans, paprika and turmeric must not be overlooked. The latter two—paprika and turmeric—are used largely for coloring purposes rather than for the flavor principle. Oleoresin capsicum serves the twofold purpose of color and flavor.

During the last few years a number of synthetic flavoring materials have found their way into the industry. Recently, however, we have seen a swing of the pendulum away from the synthetics and back towards the natural plant extractives. Nature seems to have a peculiar way of protecting her own interests in providing within the natural plant materials the sealed-in flavor note in such a way as to make it exceedingly difficult to synthesize beyond a certain degree.

As is true in the manufacture of soft extracts, it is also true in the manufacture of oleoresins that the delicate flavor and aromatic principle be carefully preserved. Each step throughout their production must be carefully supervised by skilled technicians in order to preserve these principles which, due to their delicate nature, could easily be rendered undesirable for use through improper manufacturing.

Selection of Raw Material

Of extreme importance is the initial selection and preparation of the raw material to be used for manufacturing and conversion. The proper species of botanical and the correct part to use must be considered; where only the seed —as in the case of oleoresin celery, or the root—as in solid extract of angelica root, or the bark—in such fluid and solid extracts as birch, wild cherry and sassafras, or leaves as in the case of deer tongue—proper cleaning of the seeds and roots, rossing of the bark, (removing the inner spongy layer and the outer exposed part), proper curing and shade drying of the leaves, all contribute to whether or not the crude is in the correct starting position. In addition to care in the original stages of the preparation of crude botanicals, it is of equal importance that proper reduction to the milled form be obtained in order to avoid damage to the delicate aromatic principle of the drug. The right types of milling equipment adjusted and controlled as to speed and grinding are necessary in order to obtain maximum efficiency without danger of friction produced heat developing. Correctness of mesh is of utmost importance in order to obtain the maximum extraction of the drug and to avoid impaction in the percolators and extractors resulting in possible loss of active principle.

All of these factors require knowledge, skill and production

know-how. For these purposes, a skilled personnel, proper physical facilities, a wide range of highly specialized equipment and competent laboratory control are all necessary to produce oleoresins, extracts and related botanical plant principles that will contribute and perform in proper measure to flavor elegance.

U.S. Department of Agriculture Increases 1951 Sugar Quota

The U.S. Department of Agriculture has increased the supply of quota sugar to be available to domestic consumers from 8,000,000 tons in 1950 to 8,250,000 tons for this year.

Candy Technologists Form Food Chemicals Committee

The American Assn. of Candy Technologists has appointed a committee to discuss chemicals in foods with H. C. Spenser of the Dow Chemical Co., Chairman of the Committee on Chemicals in Foods of the Manufacturing Chemists' Assn. The two committees will meet in early fall. Mr. Spencer's committee serves in advisory capacity for the government.

N.P.A. Revises Cans Order M-25 to Reduce Tin Can Use

The National Production Authority has revised its Cans Order M-25 by reducing the amount of tin cans, including those made of black plate, which producers of specified cosmetic products may use in each calendar quarter to 70% used similarly in the corresponding quarter of the base period chosen, which may be 1949 or 1950. Hair wave pads and preparations, hair dressings, pomades, cold creams, lotions and brushless shaving creams are affected. The quota percentage for all other cosmetics and toiletry supplies, including personal and other powders, is 90%. Use of cans made of black plate had not previously been restricted. Small companies who use less than 250 base boxes of tin, terne, or black plate per year are permitted to pack products regardless of the amount packed during the base period.

Pennsylvania Bottling Industry Starts $2,500,000 Campaign

Pennsylvania soft drink bottlers have started the most extensive advertising campaign in their history. Over $2,500,000 is expected to be spent during the year to raise sales, which lag now 35% behind the rest of the nation, nearly 50%. The cue which set off the campaign was the terminating of the state sales tax of 1 cent per 12-oz. bottle and 3 cents per quart on syrups.

NPA Limits Uses, Inventories of New and Used Steel Drums

The National Production Authority, U.S. Department of Commerce, has issued Order M-75, limiting uses and inventories of new and used steel drums, and establishing a use quota for packers. The order is intended to help match container requirements with currently available steel.

McKesson & Robbins, Johnson & Johnson Test Invoice FT Clause

The validity of the invoice legend as a legal contract, binding the purchaser from reselling the product below fair trade prices, is currently being tested in the New Jersey State Supreme Court. Johnson & Johnson, drug products manufacturers, and McKesson & Robbins, Inc., wholesalers, have filed suit against the Charmley Drug Co. of Newark, N.J., which has indicated it would not adhere to the fair trade clause on invoices.

The U.S. Supreme Court, in the recent Schwegmann case, held that a retailer is not bound by a fair-trade agreement between the manufacturer and other retailers. The current action is intended to find out whether an invoice containing a minimum trade clause as part of the terms of sale is legal under the N.J. fair trade act and the Supreme Court decision.

Better Business Bureaus Attack Misleading Honor Awards

The Assn. of Better Business Bureaus, at its recent 37th annual convention, adopted unanimously a resolution attacking the increasing use of misleading honor awards.

Introduced by Edward L. Greene, president of the National Better Business Bureau, the resolution decried the promotion of dubious and deceptive awards which weaken the integrity of advertising and the public's faith in it. The attack referred to awards which serve primarily as promotion of the awarding organization and which are not presented in real and equitable competition of all concerned.

The National Better Business Bureau, Inc. charges in its periodical service bulletin no. 1460, distributed to its members, that Charm Institute, newly created award publicity agency, is sponsored by a public relations firm for the dual purpose of building prestige for itself and cultivating the recipients as potential clients. The Institute presents awards to firms whose products it judges to be most charming or to contribute most charm to the American way of life.

THE ROUND TABLE –

Private Brand Manufacturers Ask Higher Price Ceilings

A private brand cosmetics ceiling price regulation similar to World War II's MPR282, though somewhat revised, has been requested from the Office of Price Administration by the Private Brand Cosmetic Manufacturers Subcommittee of the Cosmetics Industry Advisory Committee. New ceiling price regulations reflecting the rising costs of raw materials and labor have been urged by the association.

Otto of Rose Constituents Isolated to Produce Replacement

A new synthetic perfume base, Otto of Rose Alternate F. C. has been synthesized to reproduce the natural product with marked fidelity according to Frank Brumburgh of Felton Chemical Co. It has been a standing assignment for years for Felton research chemists to isolate the vital constituents of Bulgarian otto of rose. After many tests the goal was achieved and then the new replacement and extender was synthesized.

Sluys Inc. Subsidiary of Boechout, Active in U. S.

Sluys Laboratories Inc. which was established by Klaas Sluys, founder and director of N. V. Chemical Works Boechout, Boechout, Belgium, as an associated American company is now in operation in its new home in Rockford, Mich. Mr. Shuys returned to Belgium by airplane July 12.

Sluys Inc. will manufacture specialties for the perfumery, soap, flavor and allied trades. Mr. Sluys, who is 39 years old, established N. V. Chemical Works Boechout when he was 19 years old. He left school at the age of 11 to assist his father on their farm. Two years later physicians told him that he was physically unable to continue farm work. He studied bookkeeping and pursued his education in evening classes. When he was 19 he came in touch with a German-

Klaas Sluys

Hungarian chemist, a perfumer, and together they launched the company in 1931 in Amsterdam, Holland. The concern grew and today plants are operated in Boechout, Belgium, Tilburg, Holland and Rockford, Mich. In addition to operating these companies Mr.

New Plant in Rockford, Mich.

Sluys publishes the *Alchimist*, in four languages.

Henri Schuyten, father-in-law of Mr. Sluys, a chemist, and William Schuyten, brother-in-law, are at the Rockford, Mich. plant. A brother, Frank Sluys will operate the foreign plants under the general direction of Klaas Sluys. The latter has purchased a home in Rockford and will bring his wife and six children to America where he intends to reside permanently. He will become an American citizen.

Chicago Concern Acquires Innis, Speiden & Co.

The International Minerals & Chemical Co., Chicago, Ill., has taken over all assets of the Isco Chemical Division of Innis, Speiden & Co., New York, N.Y. The other assets of Innis, Speiden & Co. have become the property of Innis, Speiden & Co., Inc., wholly owned International Minerals and Chemical Corp. subsidiary. Directors of Innis, Speiden & Co., Inc. are W. H. Sheffield, Jr., J. P. Margeson, A. Norman Into, R. P. Resch, and N. C. White.

This board has elected the following officers: W. H. Sheffield, Jr., president; D. S. Cushman, vice president; N. C. White, vice president; G. S. Hamilton, secretary; Edward Tubbs, treasurer.

President W. H. Sheffield has appointed the following officers: D. S. Cushman, general manager; F. T. Shanahan, personnel manager; M. H. Quartz, assistant treasurer; C. M. Edwards, assistant secretary; and E. M. Crowe, assistant secretary.

No substantial changes in operations are anticipated.

Neumann-Buslee & Wolfe, Inc. Announces Change of Address

Neumann-Buslee & Wolfe, Inc., essential oils manufacturer, has changed its office and factory address to 5800 Northwest Highway, Chicago 31, Ill. The telephone number is ROdney 3-1130.

U.S. Department of Agriculture Increases Castor Oil Allowance

The U.S. Department of Agriculture has amended Defense Food Order No. 1, which restricts inventories and uses of castor oil. The amended order is applicable to the July-September quarter of 1951. It increases the quantities that may be used in specified categories.

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Above, Houbigant Sales Corp. sales representatives for the United States and Canada are gathered at the recent joint convention at Sheldon House, Pine Orchard, Conn. Included in the photograph are Andre Wick, president, second row, second from the left; Pierre Harang, vice president, first row, fifth from the left; H. T. Georgi, promotion manager, first row, sixth from the left; Jacques Manoha, vice president, first row, seventh from the left; and R. G. Spencer, advertising manager, first row, third from the right.

Canadian Toiletries Mfrs. Hold Annual Meeting, Review Year

St. Andrews-by-the-Sea, holiday resort in New Brunswick on the Atlantic coast, was the scene of the annual meeting of the Toilet Goods Manufacturers Assn. of Canada, which was held in the Algonquin hotel there June 25th and 26th.

P. L. Gosnell, of Zonite Products of Canada, Ltd., Ste. Therese, Que., retiring president led the session, and reviewed the year optimistically. His remarks were amplified by the executive secretary, A. E. Laverty, K. C., who reported the inauguration during the year of a Credit Information system.

The legislative committee discussed with the Department of Health the proposed toilet goods regulations, which are still in process of preparation. There was a thorough discussion of packaging problems and the committee on the subject decided to take the matter up further.

Two special speakers were heard. Dean Prather, of the A. C. Neilson Co. Ltd., Toronto, in an address entitled "Are You a Wizard?" dealt with trends and marketing, and the effect of advertising and display on sales. Dr. J. L. Thompson, of the federal department of National Health and Welfare, spoke on packaging (but asked that his remarks be not reported).

The election of officers resulted as follows: President, F. C. Cleary of Richard Hudnut, Ltd., Toronto; 1st. vice-president, R. C. Lewis, of R. C. Lewis, Ltd., Montreal; 2nd. vice-president, G. F. Bullock, of Rexall Drugs Co. Ltd., Toronto; hon. treasurer, H. E. Dwyer, of Palmers Ltd., Montreal; hon. treasurer, E. R. William, of Ponds Extract, Toronto; and executive secretary, A. E. Laverty, K.C., Montreal (re-elected).

The association will hold a mid-year meeting in Toronto, on December 7. Location of next year's annual meeting was not decided.

Strickland & Co. Opens New 60,000 Square Foot Factory

J. Strickland & Co., Memphis, toiletries and hair preparations manufacturer, has opened a new 60,000 square foot factory and office building at 1400 Ragan St. An open house and dinner marked the event.

Left to right: Strickland vice presidents Jerry Scharding and John B. Kelly and president George B. Long.

The one-story plant, of tilt-wall construction, is windowless, air-conditioned and completely illuminated by fluorescent lighting.

University of Texas Sponsors Five-Day Cosmetology Session

The University of Texas, Austin, held its First Annual Institute of Cosmetology July 23-27.

Atlas Powder Co. Reduces Emulsifier, Detergent Price

Atlas Powder Co., Wilmington, Del., has lowered prices of its Span and Tween products, emulsifiers and detergents.

San Francisco Representatives Organize Cosmetic Club

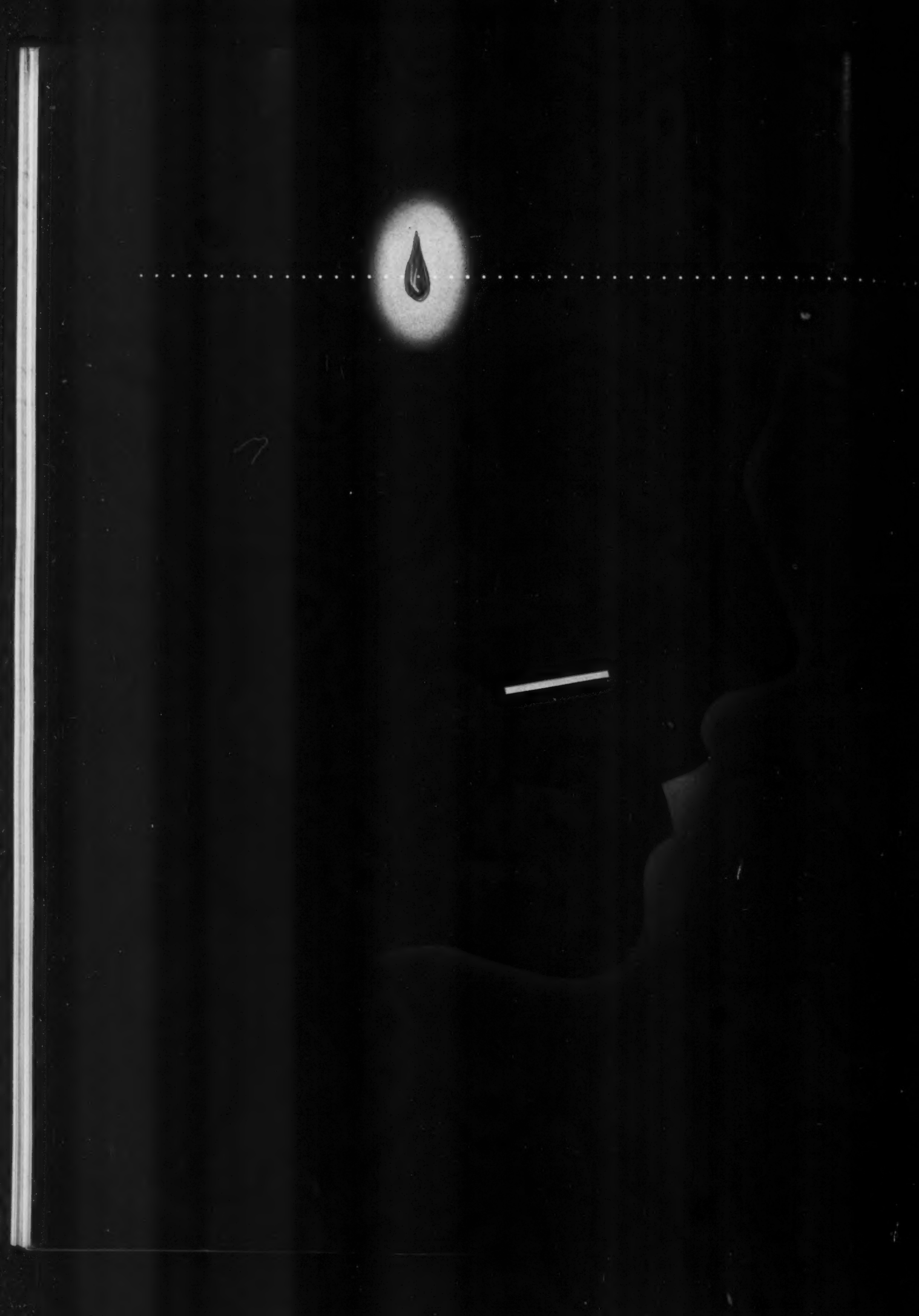
San Francisco cosmetic representatives have organized a local group, the Northern California Cosmetic Club. The following officers have been named: Hal Cutting, Tussy; Ed Marshall, Houbigant Mary Rasmussen, Gray; Michel Marcelescue, Marketing Agents; Homer Pierce, Revlon.

Representatives showing all lines in San Francisco will be divided between the St. Francis and Palace Hotels, September 4 to 8.

Among our Friends

TSURUSABURO YAGI, vice president of Picasso Cosmetic Laboratory, Nishinomiya, Hyogo-Ken, Japan, has been visiting the United States. His firm has been 20 years in business and sells to 15 countries in the Orient.

GEORGE AMTMANN has become the 49th member of George Lueders & Co.'s Veterans Organization. He was presented with a membership pin, gold watch and gifts from officers and fellow employees, and was guest of honor at a luncheon held at the Drug and Chemical Club.



....WHAT'S IN A DROP OF PERFUME ?

There are many things more than precious oils and fine chemicals that go into the making of her perfume . . . not the least of these is

Imagination—

Achieving the mood . . . the effect . . . the aura SHE seeks, is the job of the accomplished, imaginative perfumer.

The van Ameringen-Haebler perfume chemists can help you create for her the fragrance she wants.

MANUFACTURERS AND CREATORS OF THE FINEST PERFUME MATERIALS

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NEW YORK 19, N. Y.

CHICAGO • PHILADELPHIA • SALT LAKE CITY • SAN FRANCISCO • LOS ANGELES • SEATTLE • PORTLAND, ORE. • PLANT-ELIZABETH, N. J. • van AMERINGEN-HAEBLER S. A. R. L., PUTEAUX (SEINE), FRANCE

LASTING QUALITY FOR QUALITY NAMES

When your label is an actual part of the glass of an H-A cosmetic container, you have unequalled name permanence.

Delicate colors on glistening crystal bottles or gleaming opal jars make your sales message or directions a decorative, integral part of the package.

They can never come off—they're fired in the glass.

HAZEL-ATLAS GLASS COMPANY · *Wheeling, W. Va.*

REASE INGE, former manager of the Atlanta sales division of E. R. Squibb & Sons, has joined Lentheric, Inc. as executive vice-president.

HAROLD H. SHERWOOD, the dynamic founder of the Sherwood Refining Co. is the author of the leading article in the June issue of *Middle South News* on "Petroleum Takes a New Turn in the Middle South." After serving in World War I Mr. Sherwood launched his company in a small plant in Brooklyn. It has thrived and now operates four plants in Warren, Pa., Karns City, Pa., Englewood, N.J. and Gretna, La. It is Mr. Sherwood's opinion that the middle South will record a rate of economic progress faster than the rest of the country.

DR. DARRELL ALTHAUSEN has been appointed director of Un-

Dr. Darrell Althausen

gerer & Co. Dr. Althausen holds a Ph. D. in Organic Chemistry from the University of Illinois. He is also a Fellow of the International Faculty of the Andhra Research University of India. He is author of numerous technical articles and papers, as well as co-author with Dr. Ernest Guenther on "Essential Oils, Volume II." Prior to his association with Ungerer, Dr. Althausen traveled extensively. He saw active service in the second world war with the United States Quartermaster Corps, has been with the U.S. Department of Agriculture, and was at one time research supervisor of Hiram Walker & Sons, Inc. and has had broad manufacturing experience in the essential oil field.

JOSEPH P. RUDOLPH, president of Dodge & Olcott, Inc., New York essential oil house, and his wife left on July 25 for an extended trip through the mid-west, West Coast, and Canadian Rockies. Mr. Rudolph will visit Dodge & Olcott branch offices in Chicago, Los Angeles, and San Francisco during his western tour. He will return to New York about September 1.

HENRY H. EICKMEYER of the Schimmel & Co., Inc. sales staff

Henry Eickmeyer

is expected to return the end of August from several weeks vacation in Europe to make his familiar appearance again in the offices of cosmetic manufacturers. He left July 6 aboard the S.S. Veendam.

FRED C. THEILE, JR., has joined Shulton, Inc., as production manager of the firm's new fine-chemicals division at Clifton, N.J., which is now manufacturing "Vanitrope," a new flavor product and other flavor and aroma materials. Mr. Theile has been closely connected with the chemical industry for many years; he is a graduage chemist of Rutgers University, a member of the American Chem-

Fred C. Theile, Jr.

ical Society since 1943, and was formerly with a leading essential oil company. His father, Fred C. Theile, Sr., headed P. R. Dreyer Inc. for many years.

RICHARD WEBB JR., who has just been graduated from Duke University, has joined W. J. Bush & Co. He is the great-gandson of the concern's founder.

DR. EUGENE MCCAULIFF has been elected vice president in charge of sales of the Glyco Products Co., Inc., Brooklyn, N.Y.

ROBERT E. FELTON, active in the sectional operations of the Felton Chemical Co., Inc., for many years, has been called to the company's main offices in Brooklyn, N. Y., to serve in a much broader executive capacity. At the same time, Philip A. Weinrobe, Pacific coast sales representative, was appointed as western division manager, which was Mr. Felton's previous position. This announcement, made by LOUIS GAMPERT, vice-president, points up Felton's policy of advancing key personnel who have contributed to the company's progressive history

Robert E. Felton

in the aromatic, essential oil and basic flavor and perfume manufacturing fields.

Obituary

Charles Mathieu

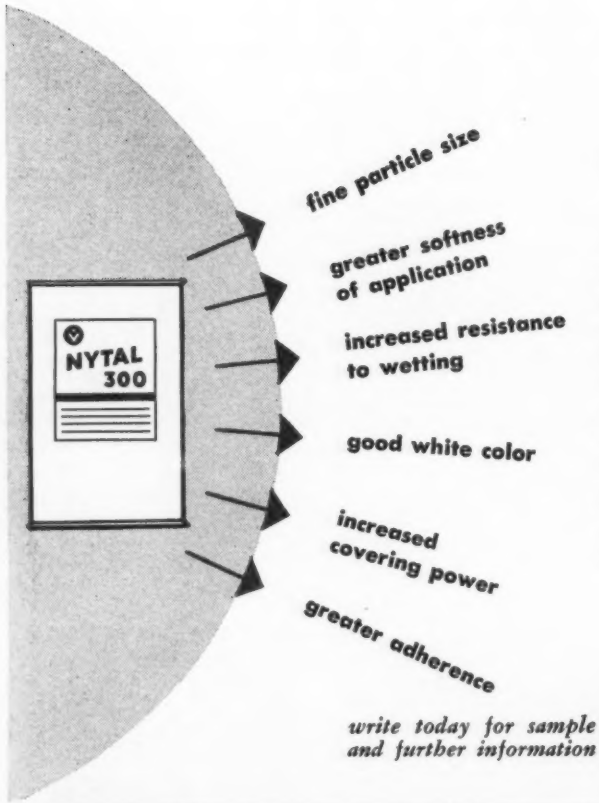
Charles Mathieu, president of Charles Mathieu, Inc., died July 10 in Italy at Gardonne, while visiting friends there. He was buried in Genoa.

E. L. Houston

E. L. Houston, formerly general manager of Helfrich Laboratories of Canada Ltd., died June 28.

Henry C. Clark

Henry C. Clark, 67, central Iowa salesman for the Colgate-Palmolive-Peet Co. for 35 years, died July 18 in Davenport, Iowa. He had been retired since 1944.



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the *Finer* talc

1100-mile-per-hour jets of high-temperature compressed air whirl particles of high grade talc ore around in a fluid energy mill to produce Nytal 300 . . . a finer, softer talc than could be obtained by any of the conventional grinding methods.

Each tiny particle in the air stream literally shatters itself against its neighbor to give an average particle size of only 1.8 microns by air permeation. Only a trace of Nytal 300 is left on a 325-mesh screen.

This *fine* talc offers you greater softness, adherence, covering power, and resistance to wetting, as well as a good white color (Higgins Brightness approx. 91).

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Try AMERCHOL L-101 in your hair preparations. It is a highly effective liquid-cholesterol penetrant.

WE KNOW OF NO CASE OF ALLERGY DUE TO AN AMERCHOL

Our research laboratories are available to you for advice and information. Our booklet will help you formulate the AMERCHOLS in O/W and W/O emulsions.

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Market Report

Spiralling Price Trend Eases

WHILE many essential oils were maintained at the price levels since World War II there was increasing evidence that the general upward price trend had about reached its course. Several articles that had previously displayed considerable strength turned easier such as Java citronella, lemongrass, patchouli, and a few of the domestic oils, including dillweed and cedarleaf oils. A desire to stimulate the demand for birchtar, anise and cassia also led to some unsettlement in local prices. Future costs of several of the French floral oils are likely to be higher. Such items as lavender and lavandin may favor buyers from a price standpoint but the concretes and absolutes are scarce abroad and producers have had to pay much better prices for flowers this year. This would include neroli, jasmin, tuberose and several others.

Lemon and Orange Oils

Prices on California lemon and orange oils continued at the highest levels in several years. For several months there had been promises to the effect that the supply situation in both oils would improve but for unknown reasons deliveries have been slow in coming through from the coast. Weather conditions have proved highly favorable for an active demand and this served to lend considerable support to the general tone. Orange felt the continued absence of any sizeable offerings from Florida or Brazil.

Lime Oil in Short Supply

The continued spell of warm weather brought out many inquiries and orders for lime oil. The real problem in the market was the availability of supply. The freeze of last year served to delay the movement of new crop in Mexico and private advices from the West Indies stated that European buyers appeared willing to pay fancy prices for new crop material. Many lots of bois de rose oil arrived here over the past month. Within a period of a single week 14 lots totaling 133 drums were received here from Brazil. The tonnage was regarded as a considerable amount of oil to reach this market within such a relatively short period. Most of the oil had been purchased some time ago against contracts.

Since a few early trial runs on the distillation of new crop peppermint proved disappointing in the Mid-West, distillers turned their attention to spearmint. The peppermint crop in the far West is expected to prove satisfactory but the disappointing yields of early runs in the Mid-West served to have a rather strengthening influence upon the tone of the market. Among the spice oils, clove displayed considerable strength. It was apparent that the spice from both Madagascar and Zanzibar was finding buyers in other countries willing to pay better prices than local importers. Ginger was another firm item in the spice group.

Glycerin

Glycerin is another basic material that bears watching. Major refiners reported a seasonal lull in fresh buying but they were having little difficulty in moving their full months production and there were increasing signs of a squeeze in supply later in the year. The government started to dip into the market for the defense program. Soap production was off, as is usual in July, as plants either curtail or completely shut down operations. Only a single lot of Argentine crude glycerin was offered for August shipment and little or no domestic crude was available for immediate delivery. May stocks according to official figures showed a total of 64,146,000 pounds in contrast to 64,760,000 pounds on hand at the end of the preceding month, April. When June figures are completed it is quite likely that they will show a further decline. The expected increase in the production of synthetic glycerin will not get underway until 1952.

Lemongrass Oil

Aromatic chemicals derived from lemongrass and citronella oils displayed signs of easing. Continued shortages and high costs of several basic chemicals, however, served to be reflected in a strong tone. Benzol shows signs of renewed strength and increased takings of toluol—for the manufacture of trinitrotoluene—promise to cut deep paths into the available supply for civilian needs.

Menthol

Peace overtures as well as an inactive consumer demand were factors behind the persistent drop in menthol prices over the past month. A series of reductions were noted as major consumers seemed willing to remain on the side lines pending the outcome of the Korean situation. China is believed to have substantial amounts of menthol and any possibility of a resumption in trade with that country will have a material influence upon prices and supply. Moreover Japan shall shortly be offering greater quantities from its new crop of peppermint. Sharp fluctuations featured gum rosin. Following substantial declines, the market turned steadier as producers moved to place their material under government loan until such time as the market recovers.

PRICES IN THE NEW YORK MARKET

(Quotations on these pages are those made by local dealers, but are subject to revision without notice)

ESSENTIAL OILS

All prices per lb. unless otherwise specified.

Almond Bit, FPA per lb.	3.25@	4.25
Sweet True	.60@	.90
Apricot Kernel	.55@	.70
Amyris	1.75@	2.50
Angelica Root	135.00@	170.00
Anise, U.S.P.	1.75@	2.00
Aspic (spike) Span	3.00@	3.80
Avocado	1.10@	1.50
Bay	1.70@	2.00
Bergamot	12.50	Nom'l
Artificial	3.50@	4.25
Birchtar, crude	1.50@	1.55
Birchtar, rectified	4.00@	4.50
Bois de Rose	4.75@	5.50
Cade, U. S. P.	.40@	.60
Cajeput U. S. P.	2.25@	2.65
Cajuput (technical)	2.40@	2.55
Calamus	20.00@	25.00
Camphor "White"	.50@	.65
Cananga, native	8.25@	10.00
Rectified	9.50@	9.85
Caraway	4.05@	5.10
Cardamon	60.00@	85.00
Cascarillo	40.00@	48.00
Cassia, rectified, U. S. P.	5.15@	5.75
Cedar leaf U. S. P.	3.50@	3.75
Cedar Wood	.65@	.70
Celery	17.00@	17.75
Chamomile Hungarian	280.00@	325.00
Cinnamon oil, Bark	35.00@	50.00
Leaf	2.85@	3.15
Citronella, Ceylon	1.75@	2.25
Java	1.90@	2.25
Java type	1.50@	2.00
Cloves, Zanzibar	3.00@	3.10
Madagascar	3.25@	3.50
Copaiba	2.50@	3.00
Coriander	30.00@	35.00
Croton	5.00@	6.20
Cumin	5.75@	7.25
Dill—		
Weed	4.00@	4.50
Seed	6.25@	6.85
Erigeron	6.25@	6.90
Eucalyptus	1.30@	1.55
Fennel, Sweet	2.45@	3.20
Garlic (oz.)	7.25@	7.70
Grapefruit	2.00@	2.50
Geranium, Rose, Algerian	26.00@	32.50
Bourbon	26.50@	32.00
Turkish	8.50@	10.00
Ginger	22.00@	25.00
Guaiac (Wood)	1.75@	2.00
Hemlock	2.50@	2.80
Juniper Berry	3.00@	4.25
Laurel leaf	4.00@	4.85
Lavandin	4.25@	5.00
Lavender, French	4.75@	10.00
Lemon, Calif.	5.00@	5.10
Italian	7.25@	8.00
Lemongrass	3.50@	3.95
Limes, distilled	7.40@	7.90
Expressed	8.10@	8.80
Linaloe wood	4.25@	4.50
Lovage (oz.)	10.00@	12.00
Mace	4.55@	6.00
Marjoram	3.75@	4.50
Neroli, Bigarde P.	85.00@	95.00
Petale, extra NF	155.00@	180.00
Nutmeg	4.35@	5.10
Ocotea Cymbarum	.85@	1.00
Olibanum	5.30@	7.00
Opopanax	45.00@	48.00
Orange, Florida	2.80	Nom'l
Brazilian	1.50	Nom'l
Calif., exp.	2.75@	
Distilled	1.10@	
Orris Root, abs. (oz.)	65.00@	70.00
Artificial	36.00	Nom'l
Patchouli	19.00@	21.00
Pennyroyal, Amer.	4.10	Nom'l
European	5.00@	5.50
Peppermint natural	7.35@	7.65
Redistilled	7.85@	8.20
Petitgrain	3.60@	4.00
Pimento, Berry	4.80@	5.50
Leaf	2.35@	2.95
Pinus Sylvestris	2.65@	2.85
Pumilio	2.85@	3.20
Rose, Bulgaria (oz.)	40.00@	60.00
Synthetic, lb.	26.00@	32.00
Rosemary, Spanish	1.00@	1.50
Sage, Spanish	1.10@	2.00
Sage, Dalmatian	14.00@	15.25
Sandalwood, N. F.	12.25@	12.75
Sassafras—		
Artificial	.85@	1.25
Snake root	31.00@	35.00
Spearmint	5.35@	5.80
Spruce	2.50@	2.75
Sweet birch Southern	2.25@	3.00
Northern	4.90@	7.50
Tansy	8.60@	9.00

Thyme, red	2.10@	2.75
White	2.35@	2.80
Valarian, extra	75.00@	88.00
Vetivert—		
Haitian	22.00@	25.00
Java	30.00@	35.00
Bourbon	29.00@	35.00
Wintergreen, Southern	3.35@	15.00
Northern	6.00@	13.50
Wormseed	7.85@	8.75
Wormwood	7.00@	7.25
Ylang Ylang, Bourbon	23.00	Nom'l
Haitian	12.85	Nom'l

TERPENELESS OILS

Bay	2.70@	2.90
Bergamot	18.00@	20.00
Grapefruit	30.00@	38.00
Lavender	11.00@	15.00
Lemon	50.00@	52.00
Lime, ex.	80.00@	90.00
Distilled	60.00@	62.00
Orange sweet	135.00@	170.00
Peppermint	15.00@	15.25
Petitgrain	5.50@	6.40
Spearmint	8.50@	10.00

DERIVATIVES AND CHEMICALS

Acetaldehyde 50%	2.15@	2.50
Acetaphenone	1.60@	1.80
Alcohol C 8	2.00@	2.35
C 9	12.60@	14.00
C 10	2.00@	2.30
C 11	13.60@	14.50
C 12	2.30@	2.65
Aldehyde C 8	9.00@	11.00
C 9	17.10@	17.30
C 10	8.35@	8.60
C 11	18.60@	20.00
C-12	15.75@	16.50
C 14 (Peach so-called)	6.85@	7.50
C-16 (Strawberry so-called)	6.25@	7.10
Amyl Acetate	.60@	.70
Amyl Butyrate	1.00@	1.25
Amylcinnamic Aldehyde	2.20@	2.40
Amyl Formate	1.00@	1.25
Amyl Phenylacetate	3.75@	4.10
Amyl Propionate	1.25@	1.60
Amyl Salicylate	1.00@	1.25
Amyl Valerinate	2.00@	2.50
Anethol	1.40@	1.60
Anisic Aldehyde	2.70@	2.90
Anisyl Acetate	5.85@	6.00
Benzyl Acetate	.75@	.85
Benzyl Alcohol	.78@	.85
Benzyl Butyrate	2.00@	2.35
Benzyl Cinnamate	3.30@	3.60
Benzyl Formate	2.00@	2.30
Benzophenone	1.65@	1.85
Benzyl-Iso-Eugenol	9.75@	10.00
Benzyl Propionate	1.60@	2.20
Benzyl Salicylate	1.90@	2.10
Benzylidene Acetone	2.00@	2.75
Bromstyrol	5.75@	6.35
Butyl Acetate, normal	19¼@	20¼
Cinnamic Alcohol	3.10@	3.75
Cinnamic Aldehyde	1.25@	1.40
Cinnamyl Acetate	3.75@	4.50
Citral, C. P.	8.10@	8.75
Citronellol	4.20@	4.50
Citronellyl Acetate	4.95@	5.20
Citronellyl Butyrate	6.50@	6.85
Coumarin	3.00@	3.50
Cuminic Aldehyde	5.90@	6.35
Diethylphthalate	.50@	.55
Dimethyl Anthranilate	5.75@	6.00
Diphenyl Methane	1.15@	1.40
Ethyl Acetate	.35@	.38
Ethyl Benzoate	.85@	.90
Ethyl Butyrate	.80@	.95
Ethyl Capronate	2.20@	3.15
Ethyl Cinnamate	2.45@	2.80
Ethyl Formate	.70@	.80
Ethyl Propionate	.90@	1.00
Ethyl Salicylate	1.00@	1.50
Ethyl Vanillin	6.75@	6.80
Eucalyptol	3.00@	3.75
Eugenol	3.50@	4.00
Geranoil, dom.	2.75@	3.25
Geranyl Acetate	3.90@	4.50
Geranyl Butyrate	6.30@	6.65
Geranyl Formate	6.35@	6.60
Guaiac Wood Acetate	4.65@	5.00
Heliotropin, dom.	3.50@	3.90
Hydrotropic Aldehyde	6.30@	6.85
Hydroxycitronellal	9.40@	10.00
Indol, C. P.	20.00@	22.00
Ionones		
Beta	10.25	Nom'l
Methyl	8.50	Nom'l
Iso-borneol	1.65@	1.80
Iso-butyl Acetate	1.00@	1.75
Iso-butyl Benzoate	1.10@	1.50
Iso-butyl Salicylate	2.15@	3.00
Iso-eugenol	4.65@	4.90
Iso-safrol	2.10@	2.80
Linalool	7.10@	7.85
Linalyl, Acetate 90%	6.85@	7.05
70%	4.85@	5.10
Linalyl Formate	13.05@	13.85
Linalyl Propionate	11.90@	12.50
Menthol	11.00@	11.50
Methyl Acetophenone	1.50@	1.90
Methyl Anthranilate	4.00	Nom'l
Methyl Benzoate	.60@	1.00
Methyl Cinnamate	1.75@	2.25
Methyl Heptenone	7.15@	8.00
Methyl Heptine Carbonate	45.00@	60.00
Methyl Naphthyl Ketone	4.75	Nom'l
Methyl Phenylacetate	1.20@	1.85
Methyl Salicylate	.55@	.80
Musk Ambrette	5.60@	5.85
Ketone	5.35@	5.60
Xylene	1.65@	1.90
Neroline (ethyl ether)	2.50@	2.80
Paracresyl Acetate	2.20@	2.75
Paracresyl Methyl Ether	2.50@	3.00
Paracresyl Phenyl-acetate	4.75@	5.40
Phenylacetaldehyde 50%	2.75@	3.25
100%	4.10@	4.65
Phenylacetic Acid	1.65@	2.25

Phenylethyl Acetate	2.00@	2.50
Phenylethyl Alcohol	1.75@	2.00
Phenylethyl Butyrate	4.20@	4.50
Phenylethyl Propionate	3.40@	4.00
Phenylethyl Salicylate	4.35@	4.80
Phenylethyl Valerianate	5.70@	5.90
Phenylpropyl Acetate	3.50@	4.20
Safrol	1.25@	1.50
Scatol C. P. (oz.)	2.65@	3.40
Styrolyl Acetate	1.90@	2.50
Vanillin (clove oil)	5.00@	5.50
(guaiacol)	3.00@	3.05
Lignin	3.00@	3.05
Vetiver Acetate	47.50@	50.00
Violet Ketone Alpha	9.90@	10.25
Yara Yara (Methyl ether)	2.25@	2.80

BEANS

Tonka Beans Surinam	1.00@	1.10
Angostura	1.75@	1.80
Vanilla Beans		
Bourbon	2.95@	3.30
Mexican, whole	6.00@	6.50
Mexican, cut	5.00@	5.40
Tahati	2.75@	2.95

SUNDRIES AND DRUGS

Acetone	.10¼@	.14
Ambergris, ounce	8.00@	17.50
Balsam, Copaiba	2.00@	2.50
Peru	2.40@	2.60
Beeswax, bleached, pure U. S. P.	.80@	.82
Yellow, refined	.73@	.75
Bismuth, subnitrate	2.65@	
Borax, crystals, carlot ton	61.25@	81.25
Boric Acid, U. S. P., ton	129.00@	133.50
Calcium, Phosphate	.08@	.08¾
Phosphate, tri-basic	.06¾@	.07½
Camphor, pwd., domestic	.60@	.62
Castoreum, nat., cans	7.10@	15.00
Cetyl, Alcohol	1.50@	1.55
Chalk, precip. bags, clts	.02⅞@	.03
Cherry Laurel Water, jug, gal.	1.25	Nom'l
Citric Acid	.28½@	.29½
Civet, ounce	4.50@	15.00
Cocoa butter, bulk	.71@	.72
Cyclohexanol (Hexalin)	.30@	.32
Dextrine, white, cwt	8.16@	
Fuller's Earth, Mines ton	27.00@	30.00
Glycerin, C. P.	.54¾@	.55¼
Gum Arabic, pwd.	.21@	.22
Amber	.15@	.15¾
Gum Benzoin, Siam	3.50@	3.85
Sumatra	.40@	.42
Gum Galbanum	.80@	.95
Gum Myrrh	.30@	.37
Henna, pwd.	.25@	.27
Kaolin	.05@	.07
Labdanum	5.00@	7.00
Lanolin, hydrous	.34@	.35
Anhydrous	.36@	.38
Magnesium, carbonate	.11¼@	.14
Stearate	.46@	.48
Musk, ounce	40.00@	50.00
Olibanum, tears	.20@	.25
Siftings	.16@	.18
Orange Flower Water, gal.	1.75@	2.25
Orris Root, Italian	.20@	.26
Paraffin	.06⅜@	.07⅛
Peroxide (hydrogen U. S. P.) bbls.	.03¾@	.05
Petrolatum, white	.06¾@	.08⅜
Quince Seed	.95@	1.25
Rice Starch	.18@	.22
Rose flowers, pale	.40@	.48
Rose Water, jug (gal.)	1.50@	2.00
Rosin, M. per cwt.	9.50@	
Salicylic Acid	.42@	Nom'l
Saponin No. 1	2.45@	2.60
Silicate, 40°, drums, works, 100 pounds	1.10@	1.40
Sodium Carb. 58% light, 100 pounds	1.60@	4.62
Hydroxide, 76% solid, 100 pounds	3.35@	4.55
Spermaceti	.34@	.37
Stearate Zinc U. S. P.	.41@	.43
Styrax	1.50@	1.85
Tartaric Acid	.39½@	.41
Tragacanth, No. 1	4.25@	4.50
Triethanolamine	.26¼@	.27¼
Violet Flowers	1.85	Nom'l
Zinc Oxide, U. S. P. ctns.	.19¼@	.20¼

OILS AND FATS

Castor, refined, drums	.36@	.36½
Coconut, crude, Atlantic ports, tanks	.12½@	
Double distilled, drums	.20¾@	.22
Corn, crude, Midwest, mill, tanks	.14@	
Corn Oil, refined, tanks	.17¼@	
Cottonseed, crude tanks	.13½@	
Grease, white	.07⅞@	.08
Lard, Chicago	.1660	Nom'l
Lard Oil, common, No. 1 drums	.14½@	.15
Olive, edible (gal.)	2.75@	3.00
Peanut, crude tanks	.16@	.17
Peanut, refined tanks	.20½@	.21
Red Oil, single distilled drums	.16¼@	.17
Double distilled	.18¾@	.20
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Double Pressed	.14¾@	.15
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HELP WANTED: One of the largest and oldest manufacturers of aromatic chemicals and allied products in the USA has an opening for a salesman with a wide experience and a good following among soap, cosmetic and perfume houses. Write fully, giving age, experience, etc. All correspondence will be kept in strict confidence. Reply to Box 2920. The American Perfumer, 48 West 38th St., New York 18, New York.

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HELP WANTED: Male correspondent under 30 with about 3 years experience in essential oil and aromatic industry. Work New York office large firm. State salary. Replies confidential. Write Box No. 2923, The American Perfumer, 48 W. 38th St., New York 18, N. Y.

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